```
=> d his

     (FILE 'HOME' ENTERED AT 14:00:41 ON 01 SEP 2005)

     FILE 'HCAPLUS' ENTERED AT 14:01:12 ON 01 SEP 2005
L1            1 US2004253289/PN OR US2004-711162#/AP,PRN

     FILE 'REGISTRY' ENTERED AT 14:01:49 ON 01 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 14:01:49 ON 01 SEP 2005
L2              TRA L1 1- RN :         4 TERMS

     FILE 'REGISTRY' ENTERED AT 14:01:50 ON 01 SEP 2005
L3            4 SEA L2

     FILE 'WPIX' ENTERED AT 14:01:54 ON 01 SEP 2005
L4            1 L1

     FILE 'HCAPLUS' ENTERED AT 14:02:18 ON 01 SEP 2005

     FILE 'REGISTRY' ENTERED AT 14:02:23 ON 01 SEP 2005

=> b hcap;d all l1
FILE 'HCAPLUS' ENTERED AT 14:03:03 ON 01 SEP 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 1 Sep 2005  VOL 143 ISS 10
FILE LAST UPDATED: 31 Aug 2005  (20050831/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


L1   ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN   2004:1080523  HCAPLUS
DN   142:16788
ED   Entered STN:  17 Dec 2004
TI   Natural plant compound with anti-hiv activity
IN   Khripach, Vladimir; Altsivanovich, Konstantin; Zabinskii, Vladimir;
     Samusevich, Mikhail
PA   Mikonik Technologies, Ltd., Belarus; Drebsk Comptech, Inc.
SO   U.S. Pat. Appl. Publ., 5 pp.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  A61K031-415
     ICS  A01N043-52; A61K047-00; A61K035-78; A61K009-20; A61K009-48;
          A61K009-14
INCL 424422000; 424464000; 424465000; 424439000; 424451000; 424489000;
     424725000
```

CC 1-5 (Pharmacology)
Section cross-reference(s): 11, 17
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004253289	A1	20041216	US 2004-711162	20040828 <--
PRAI	US 2004-711162		20040828 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004253289	ICM	A61K031-415
	ICS	A01N043-52; A61K047-00; A61K035-78; A61K009-20; A61K009-48; A61K009-14
	INCL	424422000; 424464000; 424465000; 424439000; 424451000; 424489000; 424725000
US 2004253289	NCL	424/422.000
	ECLA	A23L001/30; A61K031/415; A61K031/415+M; A61K045/06 <--

AB The invention comprises a method for treatment of HIV-infection and related conditions, particularly AIDS, using plant hormone 24-epibrassinolide, anti-HIV efficacy of which is disclosed.

ST epibrassinolide natural plant hormone HIV antiHIV

IT Hormones, plant
RL: FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(brassinosteroids; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Drug delivery systems
(capsules; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Drug delivery systems
(coating; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Contraceptives
(condoms; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Drug delivery systems
(emulsions, aqueous; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT AIDS (disease)
Anti-AIDS agents
Combination chemotherapy
Drug delivery systems
Food
Human
Human immunodeficiency virus
(natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Drug delivery systems
(ointments, creams; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Drug delivery systems
(powders; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Drug delivery systems
(solns.; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Diet
(supplements; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Drug delivery systems
(suppositories, vaginal; natural plant compound, 24-epibrassinolide with

anti-hiv activity)
IT Drug delivery systems
(suspensions; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(tablets; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Vagina
(tract, protection by HIV-inhibiting 24-epibrassinolid-containing composition; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 9068-38-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HIV, inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 144114-21-6, HIV protease
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 78821-43-9, 24-Epibrassinolide
RL: FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 52350-85-3, HIV integrase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of HIV, inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)

=> b reg;d ide l3 tot
FILE 'REGISTRY' ENTERED AT 14:03:10 ON 01 SEP 2005

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 31 AUG 2005 HIGHEST RN 862246-83-1
DICTIONARY FILE UPDATES: 31 AUG 2005 HIGHEST RN 862246-83-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

****
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

L3 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN **144114-21-6** REGISTRY
ED Entered STN: 23 Oct 1992
CN Retropepsin (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Avian leukosis virus proteinase
CN E.C. 3.4.23.16
CN Endogenous retroviral proteinase
CN FIV proteinase
CN Gag Protease
CN HIV aspartyl protease
CN HIV protease
CN HIV proteinase
CN HIV-1 aspartyl protease
CN HIV-1 aspartyl proteinase
CN HIV-1 protease
CN HIV-1 proteinase
CN HIV-1 virus aspartyl proteinase
CN HIV-1 virus protease
CN HIV-2 protease
CN HTLV proteinase
CN HTLV-1 proteinase
CN HTLV-I protease
CN Human immunodeficiency virus protease
CN Mason-Pfizer monkey virus protease
CN Moloney murine leukemia virus protease
CN Retroproteinase
CN Rous sarcoma virus protease
CN RSV proteinase
CN Simian immunodeficiency virus aspartyl proteinase
CN STLV protease
MF Unspecified
CI COM, MAN
SR CA
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CIN, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

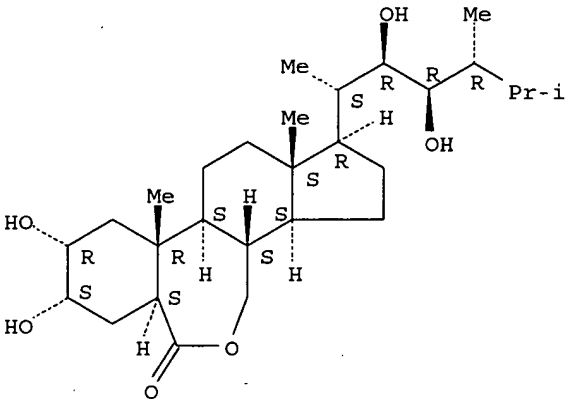
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4117 REFERENCES IN FILE CA (1907 TO DATE)
119 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4144 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN **78821-43-9** REGISTRY
ED Entered STN: 16 Nov 1984
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)-
OTHER NAMES:
CN 24(R)-Epibrassinolide
CN 24-epi-Brassinolide
CN 24-Epibrassinolide
CN 24-epibrassinolide
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-(2,3-dihydroxy-1,4,5-trimethylhexyl)hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, [1R-[1α(1S*,2R*,3R*,4R*),3aβ,3bα,6aβ,8β,9β,10aα,10bβ,12aα]]-
CN B 1105
CN BP 55

CN Epibrassinolide
CN Epibrassinolide R
CN Epin
FS STEREOSEARCH
DR 126721-49-1
MF C28 H48 O6
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CSCHEM, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

315 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
315 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN 52350-85-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN Integrase (9CI) (CA INDEX NAME)
OTHER NAMES:
CN DNA integrase
CN Enzymes, DNA-recombining, gene int
CN FimE integrase
CN Gene int proteins
CN HIV integrase
CN Proteins, gene int
DR 71850-92-5
MF Unspecified
CI MAN
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CEN, CIN, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2354 REFERENCES IN FILE CA (1907 TO DATE)
34 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2364 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN 9068-38-6 REGISTRY

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ED   Entered STN:  16 Nov 1984
CN   Nucleotidyltransferase, deoxyribonucleate, RNA-dependent (9CI)  (CA INDEX
     NAME)
OTHER NAMES:
CN   Cyscribe reverse transcriptase
CN   Cyscript
CN   Reverse transcriptase
CN   Revertase
CN   RNA revertase
CN   RNA-dependent deoxyribonucleate nucleotidyltransferase
CN   RNA-dependent DNA polymerase
CN   RNA-directed DNA polymerase
CN   RNA-instructed DNA polymerase
CN   SuperScript
CN   SuperScript II
CN   ThermoScript
CN   ThermoScript II
MF   Unspecified
CI   MAN
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
       CA, CABA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM,
       EMBASE, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, NAPRALERT, PIRA, PROMT,
       TOXCENTER, USPAT2, USPATFULL
     Other Sources:   EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

            9469 REFERENCES IN FILE CA (1907 TO DATE)
             135 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            9494 REFERENCES IN FILE CAPLUS (1907 TO DATE)


=> b wpix;d all l4 tot
FILE 'WPIX' ENTERED AT 14:03:17 ON 01 SEP 2005
COPYRIGHT (C) 2005 THE THOMSON CORPORATION

FILE LAST UPDATED:          26 AUG 2005      <20050826/UP>
MOST RECENT DERWENT UPDATE:     200555        <200555/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
    http://thomsonderwent.com/coverage/latestupdates/           <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://thomsonderwent.com/support/userguides/               <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
    DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
    FIRST VIEW - FILE WPIFV.
    FOR FURTHER DETAILS: http://www.thomsonderwent.com/dwpifv  <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
    PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-revision/
    FOR DETAILS. <<<
'BIX BI,ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE
```

L4 ANSWER 1 OF 1 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2005-030192 [03] WPIX
DNC C2005-009587
TI Use of 24-epibrassinolide, which is plant hormone belonging to brassinosteroid series for the treatment of human immunodeficiency virus infection and related diseases.
DC B04 D13
IN ALTSIVANOVICH, K; KHRIPACH, V; SAMUSEVICH, M; ZABINSKII, V
PA (DREB-N) DREBSK COMPTECH INC; (MIKO-N) MIKONIK TECHNOLOGIES LTD
CYC 1
PI US 2004253289 A1 20041216 (200503)* 5 A61K031-415 <--
ADT US 2004253289 A1 **US 2004-711162 20040828**
PRAI **US 2004-711162 20040828**
IC ICM A61K031-415
ICS A01N043-52; A61K009-14; A61K009-20; A61K009-48; A61K035-78; A61K047-00
AB US2004253289 A UPAB: 20050112
NOVELTY - Inhibition or treatment of Human Immunodeficiency Virus (HIV) infection involves administration of 24-epibrassinolide (EBI) which is a plant hormone belonging to brassinosteroid series.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) a pharmaceutical composition comprising 24-epibrassinolide optionally in combination with other anti-HIV agents; and

(2) a food supplement containing 24-epibrassinolide.

ACTIVITY - Anti-HIV. The efficacy of 24-epibrassinolide (Ia) to protect cells against HIV was evaluated in suspensional T-lymphoblastoid cell line (MT-4) by Formazan assay based on metabolic reduction of 3-(4,5-diemthylthiazol-2-yl)-2,5-diphenyltetrazolium bromide. The cells infected with HIV-1 (Strain zmb) were incubated with (Ia) (10 - 1 ng/ml). By colorimetric analysis, it was found that (Ia) protected the cells against HIV-1-cytopathic action.

MECHANISM OF ACTION - Viral replication inhibitor.

USE - For the prophylaxis or therapy of AIDS and related diseases; and in food supplements (claimed).

ADVANTAGE - The 24-epibrassinolide is safe and natural steroidal plant growth hormone for therapeutic use; exhibits excellent antiviral activity, non-toxicity and other positive effects such as blood cholesterol lowering activity; reduces cyto-killing properties of viruses; increases cell's resistance to the HIV influence; and is a potent inhibitor of viral replication.

Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: B04-J02; B14-A02B1; B14-D03; B14-G01B; D03-H01T2

=> b home
FILE 'HOME' ENTERED AT 14:03:24 ON 01 SEP 2005

=>

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=> b reg;d ide can 17 tot;d que sta l10
FILE 'REGISTRY' ENTERED AT 15:41:12 ON 01 SEP 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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provided by InfoChem.

STRUCTURE FILE UPDATES:   31 AUG 2005  HIGHEST RN 862246-83-1
DICTIONARY FILE UPDATES:  31 AUG 2005  HIGHEST RN 862246-83-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

**********************************************************************
*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,    *
* effective March 20, 2005.  A new display format, IDERL, is now     *
* available and contains the CA role and document type information.  *
*                                                                    *
**********************************************************************

Structure search iteration limits have been increased.  See HELP SLIMITS
for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html


L7   ANSWER 1 OF 32  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   551928-73-5  REGISTRY
ED   Entered STN:  21 Jul 2003
CN   5H-Benz[b]indeno[5,4-d]oxepin-5-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,5-
     dimethyl-4-(methyl-d3)hexyl-6,6,6-d3]hexadecahydro-8,9-dihydroxy-10a,12a-
     dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI)   (CA INDEX NAME)
FS   STEREOSEARCH
MF   C28 H42 D6 O6
SR   CA
LC   STN Files:   CA, CAPLUS, CASREACT

Absolute stereochemistry.
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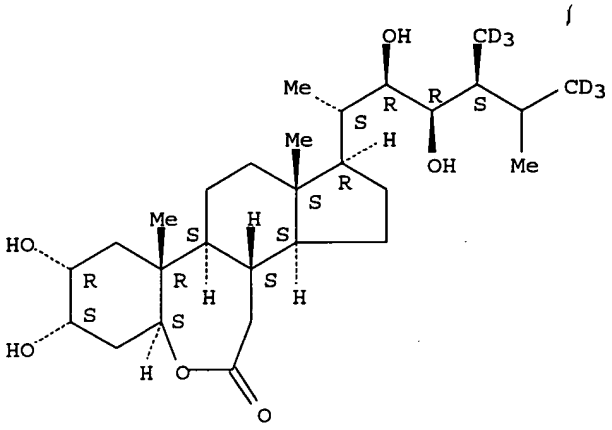
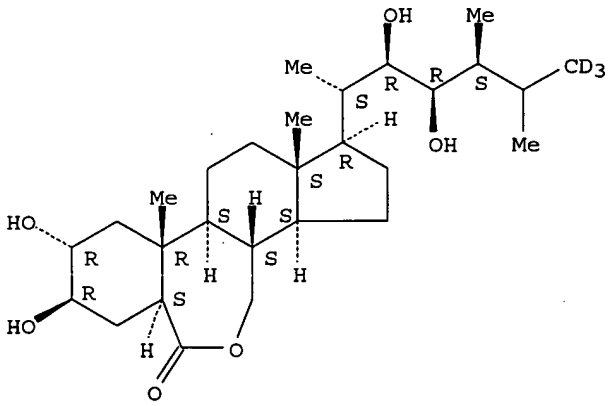


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:69422

L7 ANSWER 2 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 461670-12-2 REGISTRY
ED Entered STN: 16 Oct 2002
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl-6,6,6-d3]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8R,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C28 H45 D3 O6**
SR CA
LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

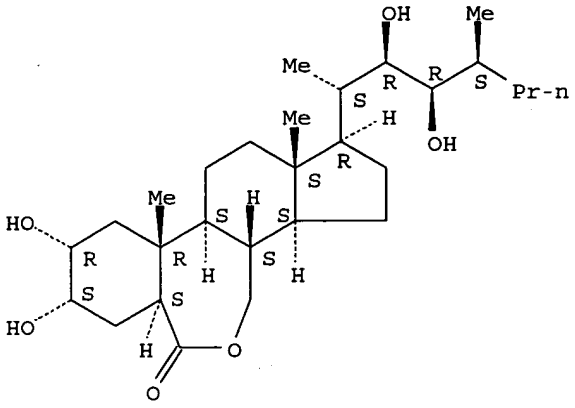
REFERENCE 1: 141:221056

REFERENCE 2: 137:263228

L7 ANSWER 3 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 273753-11-0 REGISTRY
ED Entered STN: 29 Jun 2000
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4-

dimethylheptyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-,
(1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

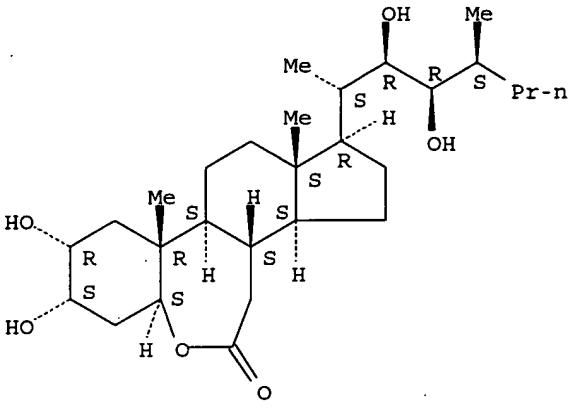
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:352046

REFERENCE 2: 133:30861

L7 ANSWER 4 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 273753-05-2 REGISTRY
ED Entered STN: 29 Jun 2000
CN 5H-Benz[b]indeno[5,4-d]oxepin-5-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4-dimethylheptyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-,
(1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.



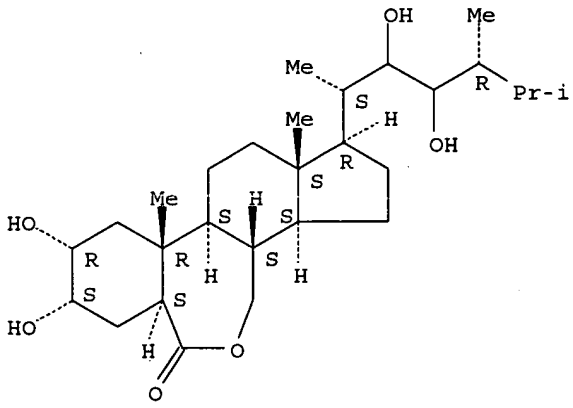
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 133:30861

L7 ANSWER 5 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 267221-93-2 REGISTRY
ED Entered STN: 30 May 2000
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



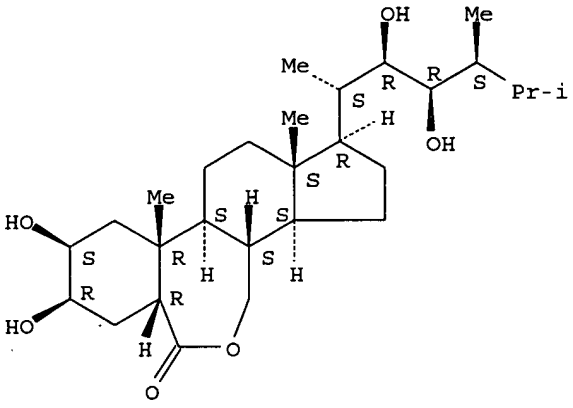
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:322030

L7 ANSWER 6 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 259104-16-0 REGISTRY
ED Entered STN: 13 Mar 2000
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aR,8R,9S,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2,3,5-Tri-epi-brassinolide
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



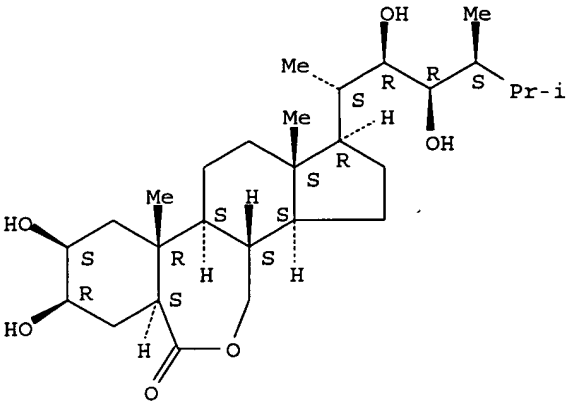
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:166386

L7 ANSWER 7 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 220401-55-8 REGISTRY
ED Entered STN: 11 Mar 1999
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8R,9S,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2,3-Di-epi-brassinolide
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

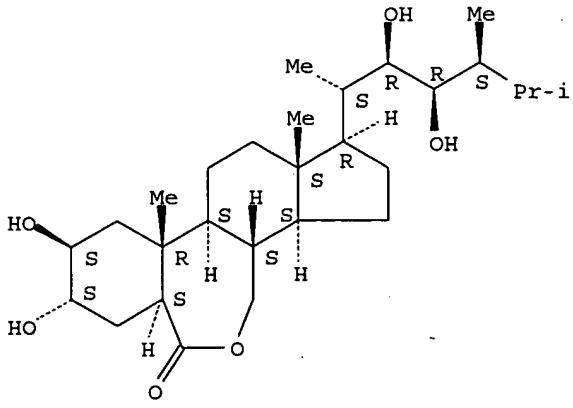
REFERENCE 1: 132:308542

REFERENCE 2: 132:166386

REFERENCE 3: 130:168538

L7 ANSWER 8 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 220401-52-5 REGISTRY
ED Entered STN: 11 Mar 1999
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9S,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2-epi-Brassinolide
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

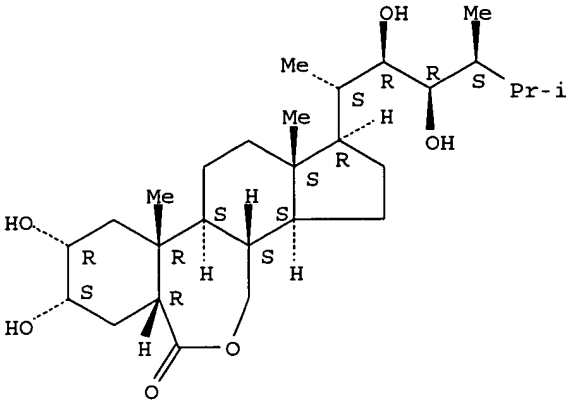
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:308542

REFERENCE 2: 130:168538

L7 ANSWER 9 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 218623-69-9 REGISTRY
ED Entered STN: 29 Jan 1999
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aR,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 5-epi-Brassinolide
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



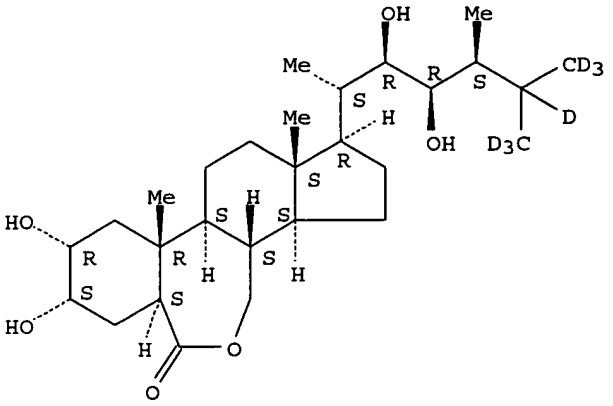
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:81696

L7 ANSWER 10 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 215502-64-0 REGISTRY
ED Entered STN: 13 Dec 1998
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4-dimethyl-5-(methyl-d3)hexyl-5,6,6,6-d4]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C28 H41 D7 O6**
SR CA
LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.



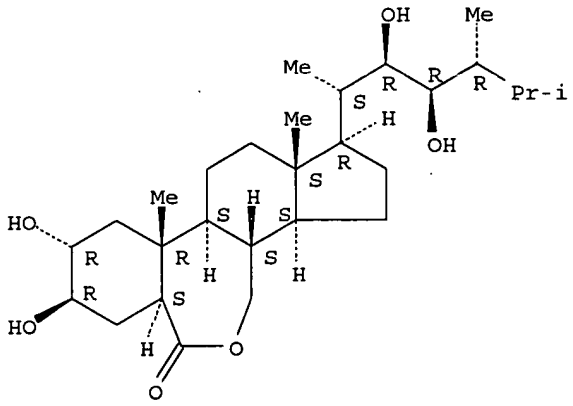
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:180768

REFERENCE 2: 129:343625

L7 ANSWER 11 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 163514-19-0 REGISTRY
ED Entered STN: 06 Jun 1995
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8R,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3β,5α,22R,23R)-
OTHER NAMES:
CN 3,24-Diepibrassinolide
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

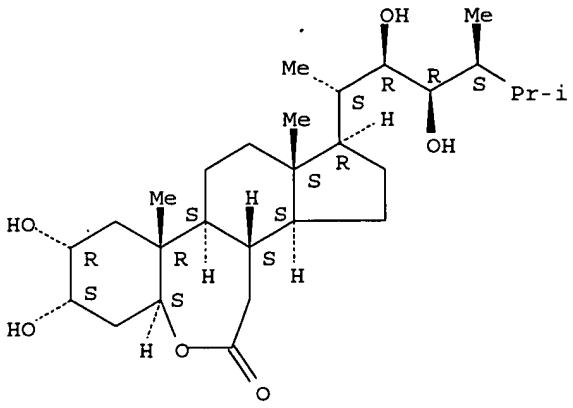
Searched by Noble Jarrell

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:310808

L7 ANSWER 12 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 146205-07-4 REGISTRY
ED Entered STN: 26 Feb 1993
CN 5H-Benz[b]indeno[5,4-d]oxepin-5-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN B-Homo-6-oxaergostan-7-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R,24S)-
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:352046

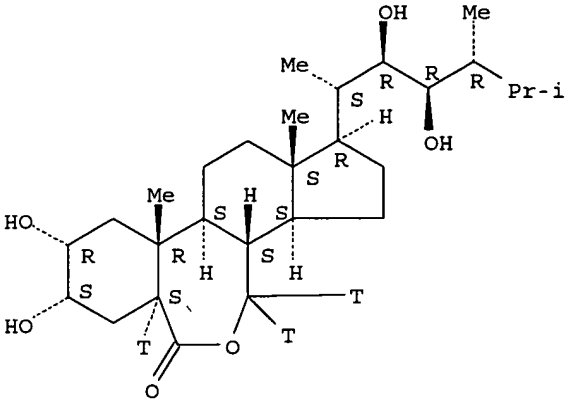
REFERENCE 2: 119:95915

REFERENCE 3: 118:147870

L7 ANSWER 13 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 145430-52-0 REGISTRY
ED Entered STN: 21 Jan 1993
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one-4-t, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-4,6a-t2-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one-5,7a,7a-t3 deriv.
CN B-Homo-7-oxaergostan-6-one-5,7a,7a-t3, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)-
FS STEREOSEARCH

MF C28 H45 O6 T3
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



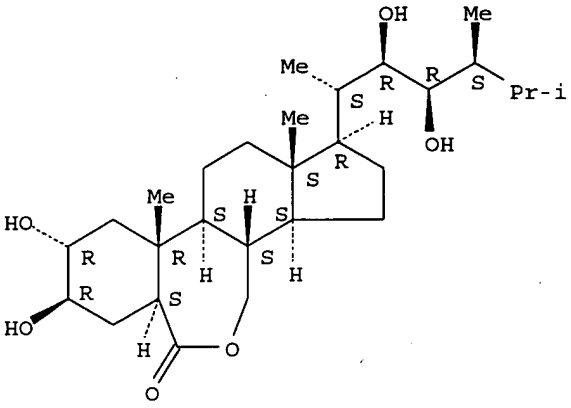
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 124:50719

REFERENCE 2: 118:59960

L7 ANSWER 14 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 140923-40-6 REGISTRY
ED Entered STN: 01 May 1992
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8R,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one deriv.
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3β,5α,22R,23R,24S)-
OTHER NAMES:
CN 3-Epibrassinolide
FS STEREOSEARCH
MF C28 H48 O6
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMINFORMRX
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:276838

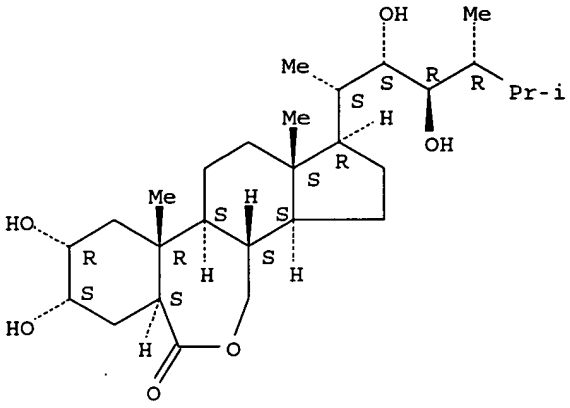
REFERENCE 2: 136:243965

REFERENCE 3: 130:168538

REFERENCE 4: 116:211195

L7 ANSWER 15 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 135559-12-5 REGISTRY
ED Entered STN: 16 Aug 1991
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2S,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one deriv.
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22S,23R)-
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMINFORMRX
(*File contains numerically searchable property data)

Absolute stereochemistry.



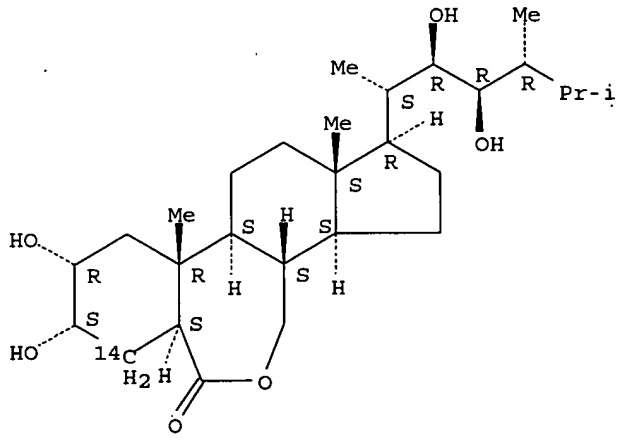
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 115:92706

L7 ANSWER 16 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 128134-34-9 REGISTRY
ED Entered STN: 13 Jul 1990
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one-7-14C, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one-4-14C deriv.
CN B-Homo-7-oxaergostan-6-one-4-14C, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)-
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)

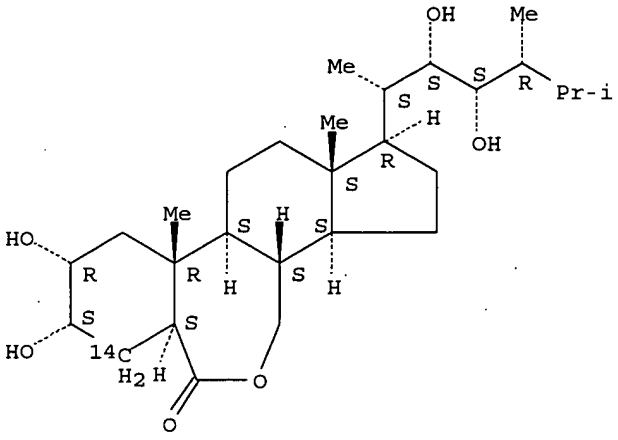
Searched by Noble Jarrell

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 113:59677

L7 ANSWER 17 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 128097-87-0 REGISTRY
ED Entered STN: 06 Jul 1990
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one-7-14C, 1-[(1S,2S,3S,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one-4-14C deriv.
CN B-Homo-7-oxaergostan-6-one-4-14C, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22S,23S)-
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.

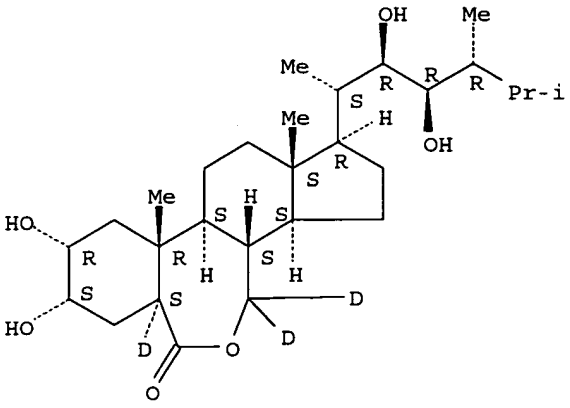


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 113:59677

L7 ANSWER 18 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 115783-59-0 REGISTRY
ED Entered STN: 13 Aug 1988
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one-4-d, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-4,6a-d2-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one-5,7a,7a-d3 deriv.
CN B-Homo-7-oxaergostan-6-one-5,7a,7a-d3, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)-
FS STEREOSEARCH
MF **C28 H45 D3 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

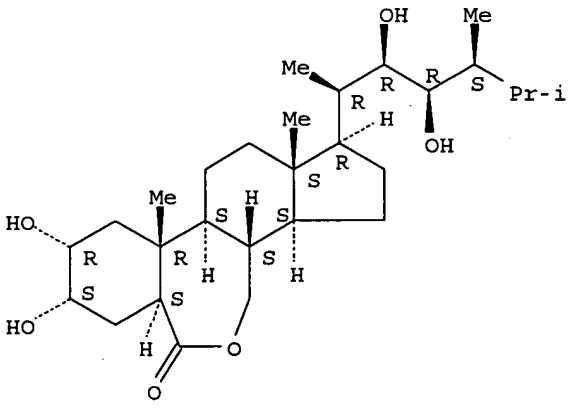
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 118:59960

REFERENCE 2: 109:89818

L7 ANSWER 19 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 113666-77-6 REGISTRY
ED Entered STN: 02 Apr 1988
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1R,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one deriv.
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,20R,22R,23R,24S)-
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMINFORMRX
(*File contains numerically searchable property data)

Absolute stereochemistry.



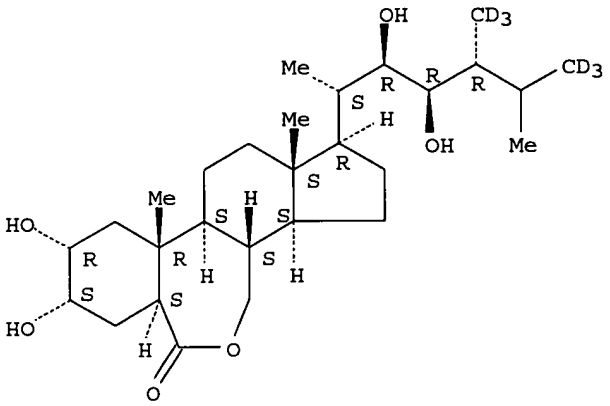
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 108:187052

L7 ANSWER 20 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 110611-54-6 REGISTRY
ED Entered STN: 10 Oct 1987
CN B-Homo-7-oxaergostan-6-one-26,26,26,28,28,28-d6, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-6-oxaergostan-6-one-26,26,26,28,28,28-d6 deriv.
FS STEREOSEARCH
MF **C28 H42 D6 O6**
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.

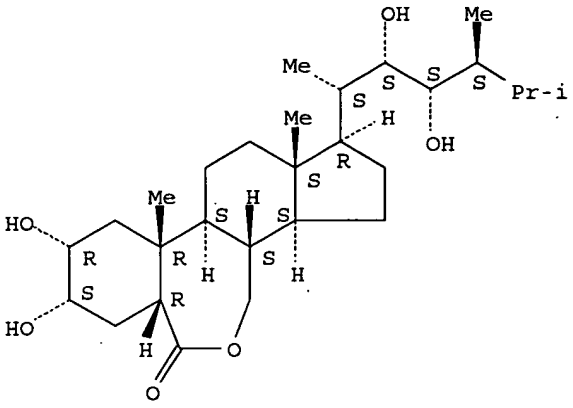


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 107:154590

L7 ANSWER 21 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 110453-84-4 REGISTRY
ED Entered STN: 27 Sep 1987
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5β,22S,23S,24S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one deriv.
OTHER NAMES:
CN (22S,23S,24S)-Epibrassinolide
FS STEREOSEARCH
MF **C28 H48 O6**
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMINFORMRX
(*File contains numerically searchable property data)

Absolute stereochemistry.



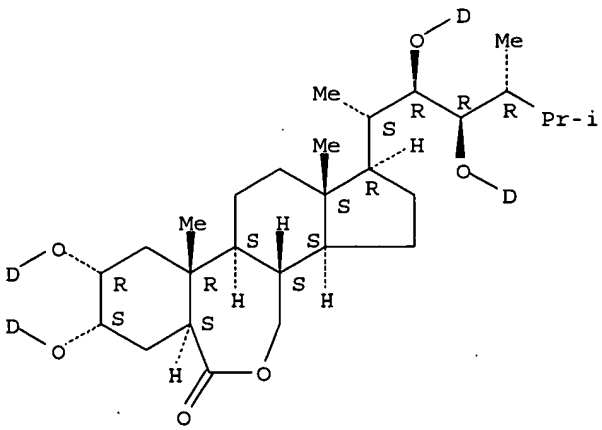
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 107:154592

L7 ANSWER 22 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 107853-67-8 REGISTRY
ED Entered STN: 02 May 1987
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetra(hydroxy-d)-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one deriv.
FS STEREOSEARCH
MF **C28 H44 D4 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



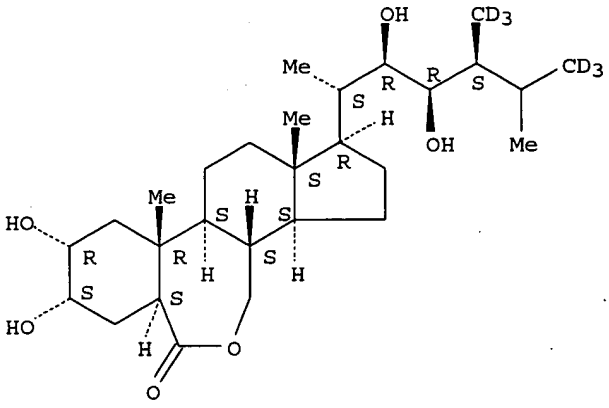
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Searched by Noble Jarrell

REFERENCE 1: 106:172256

L7 ANSWER 23 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 105075-70-5 REGISTRY
ED Entered STN: 08 Nov 1986
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1-methyl-4,5-di(methyl-d3)heptyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN B-Homo-7-oxaergostan-6-one-26,26,26,28,28,28-d6, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R,24S)-
FS STEREOSEARCH
MF **C28 H42 D6 O6**
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:221056

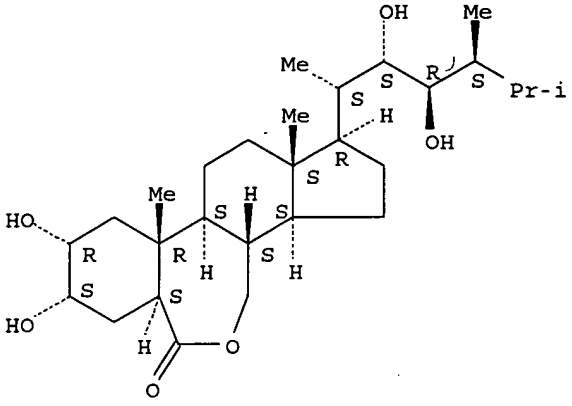
REFERENCE 2: 139:69422

REFERENCE 3: 134:53939

REFERENCE 4: 111:233350

L7 ANSWER 24 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 93860-62-9 REGISTRY
ED Entered STN: 30 Dec 1984
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22S,23R,24S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one deriv.
FS STEREOSEARCH
MF **C28 H48 O6**
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMINFORMRX
(*File contains numerically searchable property data)

Absolute stereochemistry.



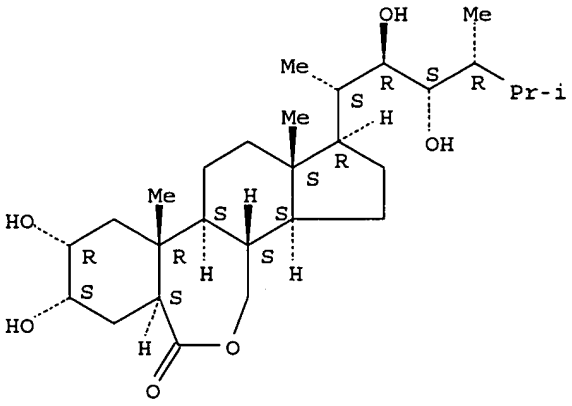
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 102:19625

L7 ANSWER 25 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 93860-61-8 REGISTRY
ED Entered STN: 30 Dec 1984
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxaergostan-6-one deriv.
OTHER NAMES:
CN NSC 325611
FS STEREOSEARCH
MF **C28 H48 O6**
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMINFORMRX
(*File contains numerically searchable property data)

Absolute stereochemistry.



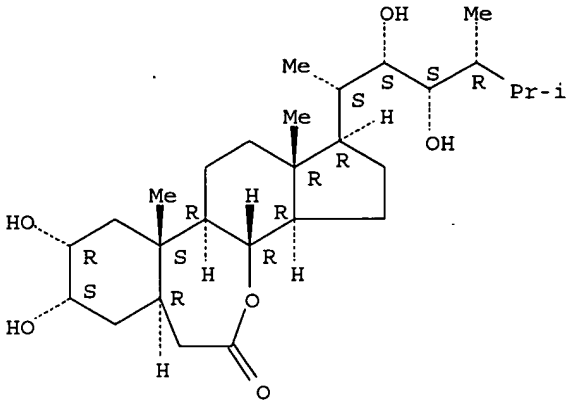
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 102:19625

L7 ANSWER 26 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 93805-92-6 REGISTRY
ED Entered STN: 18 Dec 1984
CN B-Homo-7a-oxaergostan-7-one, 2,3,22,23-tetrahydroxy-,
(2α,3α,5α,22S,23S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5H-Benz[d]indeno[4,5-b]oxepin, B-homo-7a-oxaergostan-7-one deriv.
FS STEREOSEARCH
MF **C28 H48 O6**
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



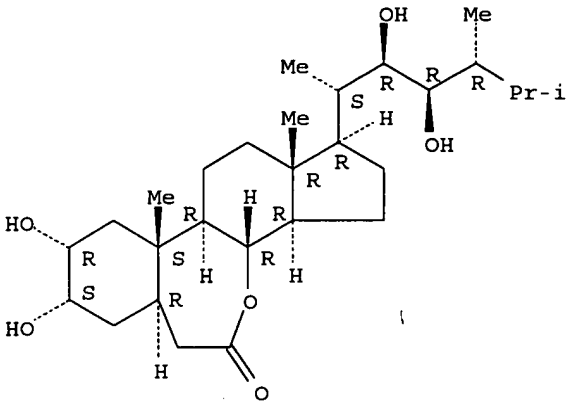
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 102:79205

L7 ANSWER 27 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 93782-67-3 REGISTRY
ED Entered STN: 18 Dec 1984
CN B-Homo-7a-oxaergostan-7-one, 2,3,22,23-tetrahydroxy-,
(2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5H-Benz[d]indeno[4,5-b]oxepin, B-homo-7a-oxaergostan-7-one deriv.
FS STEREOSEARCH
MF **C28 H48 O6**
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



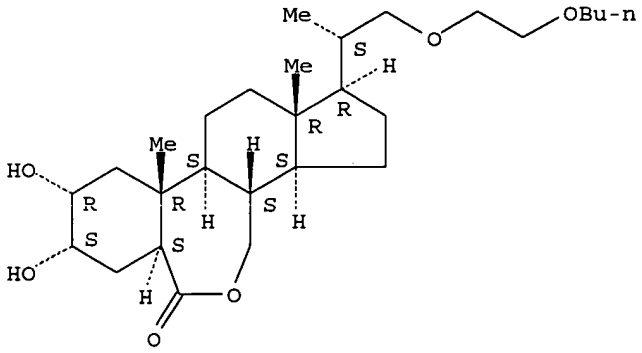
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 102:79205

L7 ANSWER 28 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 93518-68-4 REGISTRY
ED Entered STN: 18 Dec 1984
CN B-Homo-7-oxapregnan-6-one, 21-(2-butoxyethoxy)-2,3-dihydroxy-20-methyl-, (2α,3α,5α,20S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin, B-homo-7-oxapregnan-6-one deriv.
FS STEREOSEARCH
MF **C28 H48 O6**
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

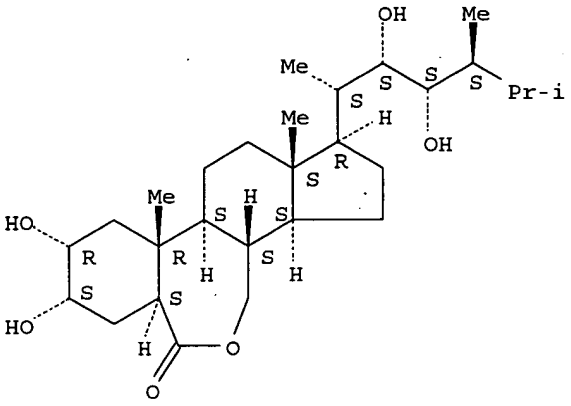
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 106:33373

REFERENCE 2: 102:6952

L7 ANSWER 29 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 80736-39-6 REGISTRY
ED Entered STN: 16 Nov 1984
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2S,3S,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22S,23S,24S)-
FS STEREOSEARCH
MF C28 H48 O6
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS, CHEMINFORMRX
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:130161

REFERENCE 2: 120:54778

REFERENCE 3: 116:41841

REFERENCE 4: 115:29709

REFERENCE 5: 114:116919

REFERENCE 6: 111:130875

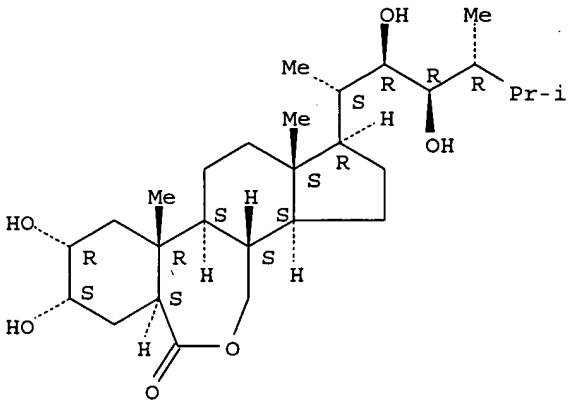
REFERENCE 7: 97:198451

REFERENCE 8: 96:82692

L7 ANSWER 30 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 78821-43-9 REGISTRY
ED Entered STN: 16 Nov 1984
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)-
OTHER NAMES:
CN 24(R)-Epibrassinolide
CN 24-epi-Brassinolide
CN 24-Epibrassinolide
CN 24-epibrassinolide
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-(2,3-dihydroxy-1,4,5-trimethylhexyl)hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, [1R-[1α(1S*,2R*,3R*,4R*),3aβ,3bα,6aβ,8β,9β,10aα,10bβ,12aα]]-
CN B 1105
CN BP 55
CN Epibrassinolide
CN Epibrassinolide R
CN Epin
FS STEREOSEARCH
DR 126721-49-1
MF C28 H48 O6
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CSCHEM, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

315 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
315 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 143:92368

REFERENCE 2: 143:23315

REFERENCE 3: 142:350508

REFERENCE 4: 142:331198

REFERENCE 5: 142:236444

REFERENCE 6: 142:194072

REFERENCE 7: 142:192507

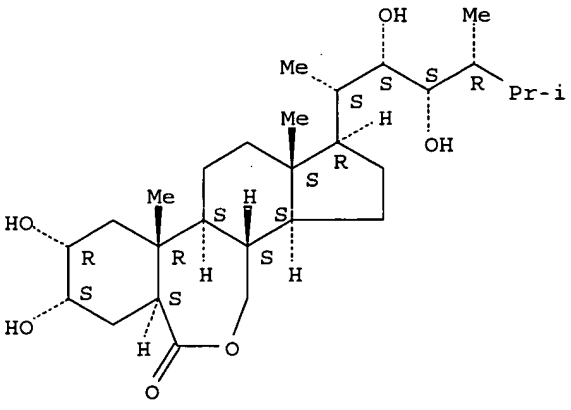
REFERENCE 8: 142:173375

REFERENCE 9: 142:130779

REFERENCE 10: 142:110422

L7 ANSWER 31 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 78821-42-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2S,3S,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22S,23S)-
OTHER NAMES:
CN (22S,23S)-24-Epibrassinolide
CN 22,23,24-Triepibrassinolide
CN 22,23,24-Trisepibrassinolide
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-(2,3-dihydroxy-1,4,5-trimethylhexyl)hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, [1R-[1α(1S*,2S*,3S*,4R*),3aβ,3bα,6aβ,8β,9β,10aα,10bβ,12aα]]-
CN B 1072
CN Brassinosteroid
CN Epibrassinolide S
CN Isoepibrassinolide
FS STEREOSEARCH
DR 126722-25-6
MF **C28 H48 O6**
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMINFORMRX, CIN, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

152 REFERENCES IN FILE CA (1907 TO DATE)
17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
152 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 143:110396

REFERENCE 2: 143:23106

REFERENCE 3: 142:424749

REFERENCE 4: 142:389072

REFERENCE 5: 142:389066

REFERENCE 6: 142:310751

REFERENCE 7: 142:236562

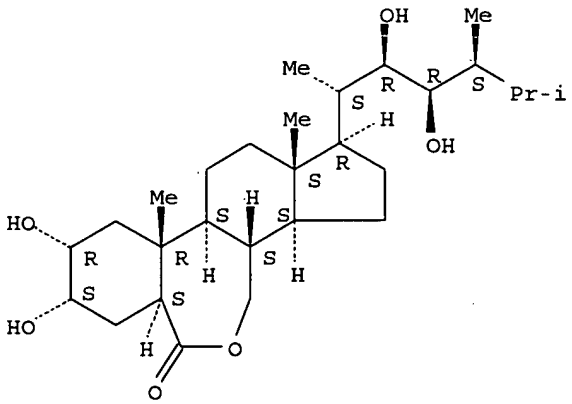
REFERENCE 8: 142:236476

REFERENCE 9: 142:213667

REFERENCE 10: 142:33980

L7 ANSWER 32 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN 72962-43-7 REGISTRY
ED Entered STN: 16 Nov 1984
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN B-Homo-7-oxaergostan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R,24S)-
OTHER NAMES:
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-(2,3-dihydroxy-1,4,5-trimethylhexyl)hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, [1R-[1α(1S*,2R*,3R*,4S*),3aβ,3bα,6aβ,8β,9β,10aα,10bβ,12aα]]-
CN Brassinolide
FS STEREOSEARCH
MF **C28 H48 O6**
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMINFORMRX, CIN, CSCHEM, EMBASE, IPA, MEDLINE, MRCK*, NAPRALERT, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

560 REFERENCES IN FILE CA (1907 TO DATE)
32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
564 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 143:148237

REFERENCE 2: 143:148216

REFERENCE 3: 143:93950

REFERENCE 4: 143:38920

REFERENCE 5: 143:23092

REFERENCE 6: 142:425343

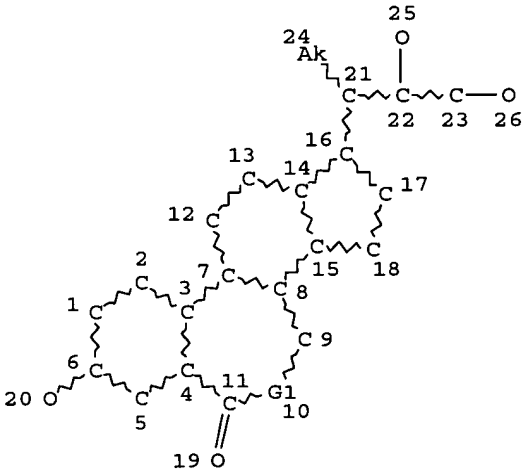
REFERENCE 7: 142:352139

REFERENCE 8: 142:276838

REFERENCE 9: 142:236473

REFERENCE 10: 142:215127

L8 STR



REP G1=(0-1) O
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE
L10 619 SEA FILE=REGISTRY SSS FUL L8

100.0% PROCESSED 9594 ITERATIONS 619 ANSWERS
SEARCH TIME: 00.00.03

=> d his full

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     (FILE 'HOME' ENTERED AT 15:34:40 ON 01 SEP 2005)

     FILE 'HCAPLUS' ENTERED AT 15:34:52 ON 01 SEP 2005
L1             1 SEA ABB=ON  PLU=ON  US2004253289/PN OR US2004-711162#/AP,PRN

     FILE 'REGISTRY' ENTERED AT 15:35:30 ON 01 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 15:35:32 ON 01 SEP 2005
L2             TRA L1 1- RN :         4 TERMS

     FILE 'REGISTRY' ENTERED AT 15:35:32 ON 01 SEP 2005
L3             4 SEA ABB=ON  PLU=ON  L2
L4             1 SEA ABB=ON  PLU=ON  L3 AND C28H48O6
               D RSD
L5            74 SEA ABB=ON  PLU=ON  C5-C6-C6-OC6/ES AND C28H48O6
L6             ' QUE ABB=ON  PLU=ON  (PMS OR MAN OR IDS OR MXS)/CI OR MIXT OR
               COMPD OR COMPOUND OR UNSPECIFIED
L7            32 SEA ABB=ON  PLU=ON  L5 NOT L6
L8             STR
L9            38 SEA SSS SAM L8
L10          619 SEA SSS FUL L8

     FILE 'HCAPLUS' ENTERED AT 15:42:04 ON 01 SEP 2005
L11          924 SEA ABB=ON  PLU=ON  L7
L12         1372 SEA ABB=ON  PLU=ON  ?EPIBRASSO? OR EPI(1A)BRASSO? OR ?BRASSINOS
               TER? OR EPIN# OR NSC325611 OR NSC325(W)611 OR NSC(W)(325611 OR
               325(W)611) OR B1105 OR B(W)1105 OR BP55 OR BP(W)55
L13            QUE ABB=ON  PLU=ON  DRUG DELIVERY SYSTEMS+OLD,NT/CT
               E HIV/CT
               E E3+ALL
               E E2+ALL
L14        47667 SEA ABB=ON  PLU=ON  HUMAN IMMUNODEFICIENCY VIRUS+OLD,NT/CT
               E ANTI-HIV/CT
               E E4+ALL
               E E2+ALL
L15        22540 SEA ABB=ON  PLU=ON  ANTI-AIDS AGENTS+RTCS/CT
               E AIDS/CT
               E E4+ALL
L16        17135 SEA ABB=ON  PLU=ON  "AIDS (DISEASE)"+OLD,NT/CT
               E BRASSIN/CT
               E E4+ALL
L17          564 SEA ABB=ON  PLU=ON  BRASSINOLIDE/CT
               E BRASSIN/CT
               E E5+ALL
               E HORMONES, PLANT/CT
               E E3+ALL
L18         1148 SEA ABB=ON  PLU=ON  "HORMONES, PLANT"+OLD,NT/CT (L) ?BRASSINO?
L19         1217 SEA ABB=ON  PLU=ON  L10
L20            3 SEA ABB=ON  PLU=ON  (L11 OR L12 OR L17 OR L18 OR L19) AND L13
               E KHRIPACH V/AU
L21          241 SEA ABB=ON  PLU=ON  ("KHRIPACH V"/AU OR "KHRIPACH V A"/AU OR
               "KHRIPACH V N"/AU OR "KHRIPACH V V"/AU OR "KHRIPACH VLADIMIR"/A
               U OR "KHRIPACH VLADIMIR A"/AU OR "KHRIPACH VLADIMIR V"/AU)
               E ALTSIVANOVICH/AU
L22            2 SEA ABB=ON  PLU=ON  "ALTSIVANOVICH KONSTANTIN"/AU
               E ZABINSKII/AU
L23            1 SEA ABB=ON  PLU=ON  "ZABINSKII VLADIMIR"/AU
               E SAMUESVICH/AU
               E SAMUSEVICH/AU
L24            2 SEA ABB=ON  PLU=ON  "SAMUSEVICH MIKHAIL"/AU
L25            2 SEA ABB=ON  PLU=ON  (DREBSK OR MIKONIK)/CS,PA
               E MIKONIK/CS,PA
L26            2 SEA ABB=ON  PLU=ON  L20 AND (L21 OR L22 OR L23 OR L24 OR L25)
L27            1 SEA ABB=ON  PLU=ON  L20 NOT L26
L28           12 SEA ABB=ON  PLU=ON  (L11 OR L12 OR L17 OR L18 OR L19)(L)(THU
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              OR PAC OR DMA)/RL
L29           2 SEA ABB=ON  PLU=ON  L28 AND (L21 OR L22 OR L23 OR L24 OR L25)
L30          10 SEA ABB=ON  PLU=ON  L28 NOT L29
                E HIV/CT
                E E3+ALL
                E HIV PROTEASE/CT
                E E3+ALL
L31        4144 SEA ABB=ON  PLU=ON  HIV PROTEASE+NT/CT
L32           1 SEA ABB=ON  PLU=ON  (L11 OR L12 OR L17 OR L18 OR L19) AND (L14
              OR L15 OR L16 OR L31)
L33           2 SEA ABB=ON  PLU=ON  (L26 OR L29 OR L32)
L34          13 SEA ABB=ON  PLU=ON  (L27 OR L28)

     FILE 'MEDLINE' ENTERED AT 16:07:30 ON 01 SEP 2005
L35         431 SEA ABB=ON  PLU=ON  (L11 OR L12 OR L19)
                E BRASSINOLIDE/CT
                E EPIBRASSINOLIDE/CT
                E BRASSINOSTER/CT
                E HIV/CT
                E E3+ALL
L36       49406 SEA ABB=ON  PLU=ON  HIV+NT/CT
                E E45
                E E3+ALL
L37       17501 SEA ABB=ON  PLU=ON  REVERSE TRANSCRIPTASE INHIBITORS+NT/CT
                E AIDS/CT
                E E3+ALL
                E E2
                E E3+ALL
L38       63783 SEA ABB=ON  PLU=ON  ACQUIRED IMMUNODEFICIENCY SYNDROME/CT
                E ANTI-HIV/CT
                E E4+ALL
L39       26890 SEA ABB=ON  PLU=ON  ANTI-HIV AGENTS+NT/CT
                E ANTI-AIDS/CT
                E E4+ALL
                E HIV PROTEASE/CT
                E E3+ALL
L40        1774 SEA ABB=ON  PLU=ON  HIV PROTEASE/CT
                E HIV PROTEASE INHIBITORS/CT
                E E3+ALL
L41        6296 SEA ABB=ON  PLU=ON  HIV PROTEASE INHIBITORS+NT/CT
L42         200 SEA ABB=ON  PLU=ON  L35 AND (TU OR AD OR PD OR PK)/CT
L43           0 SEA ABB=ON  PLU=ON  (L35 OR L42) AND (L36 OR L37 OR L38 OR L39
              OR L40 OR L41)

     FILE 'EMBASE' ENTERED AT 16:12:48 ON 01 SEP 2005
                E HIV/CT
                E E3+ALL
                E E2+ALL
L44       58042 SEA ABB=ON  PLU=ON  HUMAN IMMUNODEFICIENCY VIRUS+NT/CT
                E ANTI-HIV/CT
                E E4+ALL
                E E2+ALL
L45        1665 SEA ABB=ON  PLU=ON  ANTI HUMAN IMMUNODEFICIENCY VIRUS AGENT/CT
                E HIV PROTEASE/CT
                E E3+ALL
                E E2
                E E3+ALL
L46             QUE ABB=ON  PLU=ON  PROTEINASE+NT/CT
                E HIV PROTEASE INHIBITORS/CT
                E E3+ALL
                E E2+ALL
L47             QUE ABB=ON  PLU=ON  PROTEINASE INHIBITOR+NT/CT
                E AIDS/CT
                E E3+ALL
                E E2+ALL
L48       58844 SEA ABB=ON  PLU=ON  ACQUIRED IMMUNE DEFICIENCY SYNDROME+NT/CT
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                E ANTI-AIDS
                E ANTI-AIDS/CT
                E ANTI ACQUIR/CT/CT
                E ANTI ACQUIR/CT
                E ANTI-ACQUIR/CT
L49          239 SEA ABB=ON  PLU=ON  (L11 OR L12 OR L19)
L50           31 SEA ABB=ON  PLU=ON  L49 AND (CB OR AD OR DT OR PD)/CT
                E BRASSINLIDE/CT
                E E4+ALL
L51           68 SEA ABB=ON  PLU=ON  BRASSINOLIDE/CT
                E BRASSINOSTER/CT
                E E4+ALL
L52          125 SEA ABB=ON  PLU=ON  BRASSINOSTEROID/CT
L53           16 SEA ABB=ON  PLU=ON  (L51 OR L52) (L) (CB OR AD OR DT OR PD)/CT
L54            8 SEA ABB=ON  PLU=ON  (L49 OR L50 OR L53) AND (L44 OR L45 OR L46
                OR L47 OR L48)
L55           14 SEA ABB=ON  PLU=ON  (1999273723/AN OR 2000057269/AN OR
                2001398860/AN OR 2002134469/AN OR 2002423235/AN OR 2003097079/A
                N OR 2003369601/AN OR 2004032208/AN OR 2004280593/AN OR
                2004515206/AN OR 92112219/AN OR 93307067/AN OR 94145136/AN OR
                97183315/AN) AND L50

=> b hcap

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L33  ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN   2004:1080523  HCAPLUS
DN   142:16788
ED   Entered STN:  17 Dec 2004
TI   Natural plant compound with anti-hiv activity
IN   Khripach, Vladimir; Altsivanovich, Konstantin;
     Zabinskii, Vladimir; Samusevich, Mikhail
PA   Mikonik Technologies, Ltd., Belarus; Drebsk Comptech,
     Inc.
SO   U.S. Pat. Appl. Publ., 5 pp.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  A61K031-415
     ICS  A01N043-52; A61K047-00; A61K035-78; A61K009-20; A61K009-48;
          A61K009-14
```

INCL 424422000; 424464000; 424465000; 424439000; 424451000; 424489000; 424725000
CC 1-5 (Pharmacology)
Section cross-reference(s): 11, 17
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004253289	A1	20041216	US 2004-711162	20040828
PRAI	US 2004-711162		20040828		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004253289	ICM	A61K031-415
	ICS	A01N043-52; A61K047-00; A61K035-78; A61K009-20; A61K009-48; A61K009-14
	INCL	424422000; 424464000; 424465000; 424439000; 424451000; 424489000; 424725000
US 2004253289	NCL	424/422.000
	ECLA	A23L001/30; A61K031/415; A61K031/415+M; A61K045/06

AB The invention comprises a method for treatment of HIV-infection and related conditions, particularly AIDS, using plant hormone 24-epibrassinolide, anti-HIV efficacy of which is disclosed.

ST epibrassinolide natural plant hormone HIV antiHIV

IT **Hormones, plant**
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**brassinosteroids**; natural plant compound, 24-**epibrassinolide** with anti-hiv activity)

IT **Drug delivery systems**
(capsules; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT **Drug delivery systems**
(coating; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Contraceptives
(condoms; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT **Drug delivery systems**
(emulsions, aqueous; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT **AIDS (disease)**
Anti-AIDS agents
Combination chemotherapy
Drug delivery systems
Food
Human
Human immunodeficiency virus
(natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT **Drug delivery systems**
(ointments, creams; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT **Drug delivery systems**
(powders; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT **Drug delivery systems**
(solns.; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Diet
(supplements; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT **Drug delivery systems**
(suppositories, vaginal; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT **Drug delivery systems**
(suspensions; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT **Drug delivery systems**
(tablets; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Vagina
(tract, protection by HIV-inhibiting 24-epibrassinolid-containing composition; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 9068-38-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HIV, inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT **144114-21-6**, HIV protease
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT **78821-43-9**, 24-Epibrassinolide
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 52350-85-3, HIV integrase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of HIV, inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT **144114-21-6**, HIV protease
RL: BSU (Biological study, unclassified); BIOL (Biological study); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**
(inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
RN 144114-21-6 HCAPLUS
CN Retropepsin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L33 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:964837 HCAPLUS
DN 141:374732
ED Entered STN: 12 Nov 2004
TI 24-Epibrassinolide for decreasing cholesterol level in blood
IN **Khripach, Vladimir**; **Altsivanovich, Konstantin**; Zhabinskii, Vladimir; **Samusevich, Mikhail**
PA **Mikonik** Technologies, Ltd, Belarus; **Drebsk** Comptech, Inc.
SO U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-365
INCL 514450000
CC 1-10 (Pharmacology)
Section cross-reference(s): 11, 18, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004225010	A1	20041111	US 2004-710613	20040723
PRAI	US 2004-710613		20040723		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004225010	ICM	A61K031-365
	INCL	514450000

US 2004225010 NCL 514/450.000
ECLA A23L001/30B2; A61K031/365

AB The invention discloses a method for improving blood cholesterol and its conjugates levels in a mammal, which is based on the administration of steroidal plant hormone 24-epibrassinolide.

ST epibrassinolide blood cholesterol plant hormone

IT Glycerides, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood; method for decreasing cholesterol level in blood)

IT **Drug delivery systems**
(capsules; method for decreasing cholesterol level in blood)

IT Diet
(cholesterol-enriched; method for decreasing cholesterol level in blood)

IT **Drug delivery systems**
(emulsions, aqueous; method for decreasing cholesterol level in blood)

IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(high-d.; method for decreasing cholesterol level in blood)

IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(low-d.; method for decreasing cholesterol level in blood)

IT **Drug delivery systems**
Hypercholesterolemia
Hypolipemic agents
Nutrition, animal
(method for decreasing cholesterol level in blood)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(method for decreasing cholesterol level in blood)

IT **Drug delivery systems**
(powders; method for decreasing cholesterol level in blood)

IT **Drug delivery systems**
(solns.; method for decreasing cholesterol level in blood)

IT Diet
(supplements; method for decreasing cholesterol level in blood)

IT **Drug delivery systems**
(suspensions; method for decreasing cholesterol level in blood)

IT **Drug delivery systems**
(tablets; method for decreasing cholesterol level in blood)

IT 57-88-5, Cholest-5-en-3-ol (3β)-, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood; method for decreasing cholesterol level in blood)

IT 1406-18-4, Vitamin E 11103-57-4, Vitamin A
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(method for decreasing cholesterol level in blood)

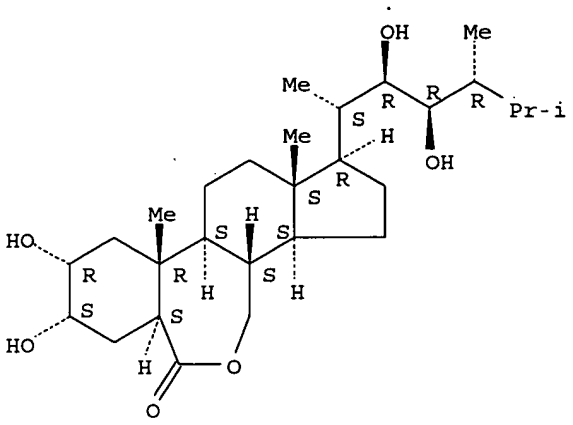
IT 78821-43-9, 24-Epibrassinolide
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(method for decreasing cholesterol level in blood)

IT **78821-43-9**, 24-Epibrassinolide
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(method for decreasing cholesterol level in blood)

RN 78821-43-9 HCAPLUS

CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d all hitstr l34 tot

L34 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:876419 HCAPLUS
ED Entered STN: 25 Aug 2005
TI Antitumor application of synthetic precursors of brassinosteroids, their spirostane analogs, and cyclodextrin inclusion compounds
IN Azevedo, Mariangela De Burgos Martins; Fabrin Neto, Joao Batista; Zullo, Marco Antonio Teixeira; Anazetti, Maristella Conte; Quiros, Nora Marcela Haun; Melo, Patricia da Silva
PA Universidade Estadual de Campinas-UNICAMP, Brazil
SO Braz. Pedido PI, 16 pp.
CODEN: BPXXDX
DT Patent
LA Portuguese
IC ICM A61K031-724
ICS A61K035-78; A61P035-02
CC 1-6 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI BR 2003000183	A	20041026	BR 2003-183	20030128
PRAI BR 2003-183		20030128		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
BR 2003000183	ICM	A61K031-724
	ICS	A61K035-78; A61P035-02

AB Synthetic precursors of 28-homobrassinosteroids, their spirostane analogs, and their cyclodextrin inclusion compds. may be use as antitumor agents by means of their mitochondrial dehydrogenase (MTT) reduction to induce apoptosis in leukemic HL60 cells.
ST brassinosteroid precursor spirostane analog antitumor
IT Animal cell line
(HL-60; antitumor application of synthetic precursors of brassinosteroids, their spirostane analogs, and cyclodextrin inclusion compds.)
IT Animal tissue culture
Antitumor agents
Apoptosis
Cell membrane
Human
Leukemia
(antitumor application of synthetic precursors of brassinosteroids,

their spirostane analogs, and cyclodextrin inclusion compds.)

IT Inclusion compounds
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antitumor application of synthetic precursors of **brassinosteroids**, their spirostane analogs, and cyclodextrin inclusion compds.)

IT **Hormones, plant**
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**brassinosteroids**; antitumor application of synthetic precursors of **brassinosteroids**, their spirostane analogs, and cyclodextrin inclusion compds.)

IT Fibroblast
(culture of; antitumor application of synthetic precursors of brassinosteroids, their spirostane analogs, and cyclodextrin inclusion compds.)

IT 553-24-2, Neutral red
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(antitumor application of synthetic precursors of brassinosteroids, their spirostane analogs, and cyclodextrin inclusion compds.)

IT 9013-05-2, Phosphatase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antitumor application of synthetic precursors of brassinosteroids, their spirostane analogs, and cyclodextrin inclusion compds.)

IT 83-48-7 512-04-9, Diosgenin 4965-78-0 12619-70-4D, Cyclodextrin, inclusion compds. 53139-42-7 58274-46-7, Isostigmasterol 74174-49-5 **82373-95-3 83509-42-6**, 28-Homocastasterone 127128-79-4 130450-01-0 189308-95-0 189309-02-2 523981-69-3 861854-06-0
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antitumor application of synthetic precursors of **brassinosteroids**, their spirostane analogs, and cyclodextrin inclusion compds.)

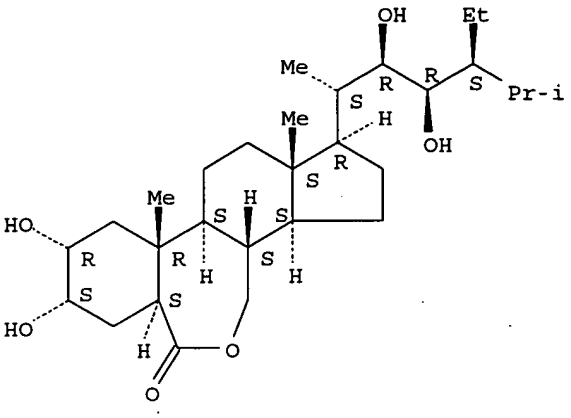
IT 9035-82-9, Dehydrogenase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(mitochondrial MTT; antitumor application of synthetic precursors of brassinosteroids, their spirostane analogs, and cyclodextrin inclusion compds.)

IT **82373-95-3 83509-42-6**, 28-Homocastasterone
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antitumor application of synthetic precursors of **brassinosteroids**, their spirostane analogs, and cyclodextrin inclusion compds.)

RN 82373-95-3 HCAPLUS

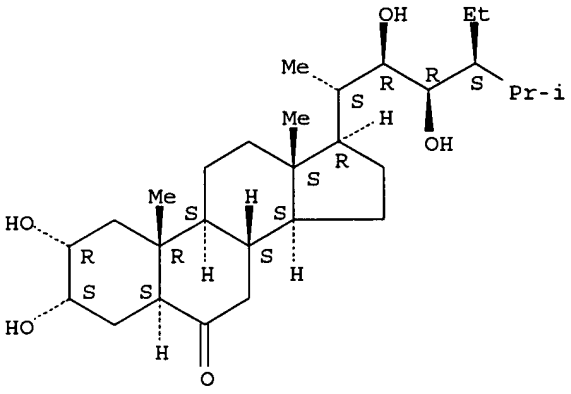
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-4-ethyl-2,3-dihydroxy-1,5-dimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 83509-42-6 HCAPLUS
CN Stigmastan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:427700 HCAPLUS
DN 143:13202
ED Entered STN: 20 May 2005
TI New use of brassinolide in reversing multiple medicine resistance of tumor cell
IN Xian, Lijian; Cao, Qiyuan; Li, Yongqiang
PA Tumour Prevention and Treating Centre, Zhongshan City, Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given
CODEN: CNXXEV
DT Patent
LA Chinese
IC ICM A61K031-58
ICS A61P043-00
CC 63-4 (Pharmaceuticals)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1491653	A	20040428	CN 2003-140318	20030828
PRAI CN 2003-140318		20030828		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

CN 1491653 ICM A61K031-58
ICS A61P043-00
AB The present invention relates to the new use of brassinolide in reversing the resistance of tumor cell to multiple medicines. Brassinolide has powerful bioactivity, is safe and non-toxic. At very low concentration, brassinolide itself has no tumor inhibiting effect and can reverse the resistance of tumor cell with high resistance to multiple medicines.
ST brassinolide drug resistance cancer anticancer agent
IT Multidrug resistance
Neoplasm
(brassinolide in reversing multiple medicine resistance of tumor cell)
IT **Hormones, plant**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**brassinosteroids**; **brassinolide** in reversing multiple medicine resistance of tumor cell)

L34 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:1080523 HCAPLUS
DN 142:16788
ED Entered STN: 17 Dec 2004
TI Natural plant compound with anti-hiv activity
IN Khripach, Vladimir; Altsivanovich, Konstantin; Zabinskii, Vladimir; Samusevich, Mikhail
PA Mikonik Technologies, Ltd., Belarus; Drebsk Comptech, Inc.
SO U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-415
ICS A01N043-52; A61K047-00; A61K035-78; A61K009-20; A61K009-48; A61K009-14
INCL 424422000; 424464000; 424465000; 424439000; 424451000; 424489000; 424725000
CC 1-5 (Pharmacology)
Section cross-reference(s): 11, 17
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004253289	A1	20041216	US 2004-711162	20040828
PRAI US 2004-711162		20040828		

CLASS

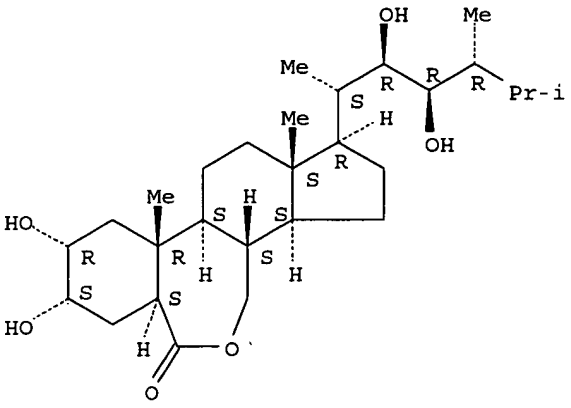
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004253289	ICM	A61K031-415
	ICS	A01N043-52; A61K047-00; A61K035-78; A61K009-20; A61K009-48; A61K009-14
	INCL	424422000; 424464000; 424465000; 424439000; 424451000; 424489000; 424725000
US 2004253289	NCL	424/422.000
	ECLA	A23L001/30; A61K031/415; A61K031/415+M; A61K045/06

AB The invention comprises a method for treatment of HIV-infection and related conditions, particularly AIDS, using plant hormone 24-epibrassinolide, anti-HIV efficacy of which is disclosed.
ST epibrassinolide natural plant hormone HIV antiHIV
IT **Hormones, plant**
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**brassinosteroids**; natural plant compound, 24-**epibrassinolide** with anti-hiv activity)
IT Drug delivery systems
(capsules; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(coating; natural plant compound, 24-epibrassinolide with anti-hiv activity)

IT Contraceptives
(condoms; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(emulsions, aqueous; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT AIDS (disease)
Anti-AIDS agents
Combination chemotherapy
Drug delivery systems
Food
Human
Human immunodeficiency virus
(natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Natural products, pharmaceutical
RL: FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(ointments, creams; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(powders; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(solns.; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Diet
(supplements; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(suppositories, vaginal; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(suspensions; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Drug delivery systems
(tablets; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT Vagina
(tract, protection by HIV-inhibiting 24-epibrassinolid-containing composition; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 9068-38-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HIV, inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 144114-21-6, HIV protease
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT **78821-43-9**, 24-Epibrassinolide
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT 52350-85-3, HIV integrase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of HIV, inhibitor; natural plant compound, 24-epibrassinolide with anti-hiv activity)
IT **78821-43-9**, 24-Epibrassinolide
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(natural plant compound, 24-epibrassinolide with anti-hiv activity)
RN 78821-43-9 HCAPLUS

CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)

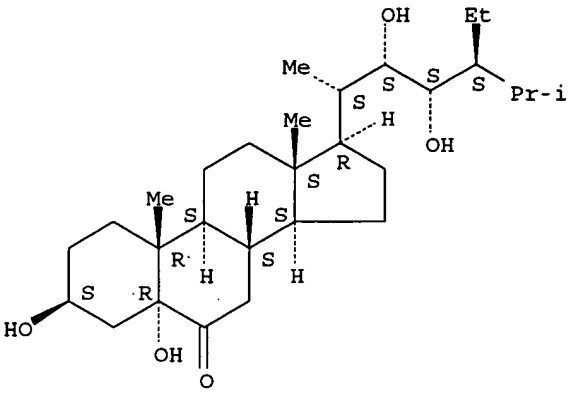
Absolute stereochemistry.



L34 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:1029441 HCAPLUS
DN 142:253719
ED Entered STN: 01 Dec 2004
TI In vitro and in vivo antiherpetic activity of three new synthetic brassinosteroid analogues
AU Michelini, Flavia M.; Ramirez, Javier A.; Berra, Alejandro; Galagovsky, Lydia R.; Alche, Laura E.
CS Laboratorio de Virologia, Depàrtamento de Quimica Biologica, Ciudad Universitaria, Facultad de Ciencias Exactas y Naturales-UBA, Buenos Aires, 1428, Argent.
SO Steroids (2004), 69(11-12), 713-720
CODEN: STEDAM; ISSN: 0039-128X
PB Elsevier B.V.
DT Journal
LA English
CC 1-5 (Pharmacology)
AB Brassinosteroids are a novel group of steroids that appear to be ubiquitous in plants and are essential for normal plant growth and development. It has been previously reported that brassinosteroid analogs exert an antiviral activity against herpes simplex virus type 1 (HSV-1) and arenaviruses. In the present study, we report the chemical synthesis of compds. (22S,23S)-3β-bromo-5α,22,23-trihydroxystigmastan-6-one (2), (22S,23S)-5α-fluoro-3β-22,23-trihydroxystigmastan-6-one (3), (22S,23S)-3β,5α,22,23-tetrahydroxy-stigmastan-6-one (4) as well as their antiherpetic activity both in a human conjunctive cell line (IOBA-NHC) and in the murine herpetic stromal keratitis (HSK) exptl. model. All compds. prevented HSV-1 multiplication in NHC cells in a dose dependent manner when added after infection with no cytotoxicity. Administration of compds. 2, 3, and 4 to the eyes of mice at 1, 2, and 3 days post-infection delayed and reduced the incidence of HSK, consisting mainly of inflammation, vascularization, and necrosis, compared to untreated, infected mice. However, viral titers of eye washes showed no differences among samples from treated and untreated mice. Since the decrease in the percentage of mice with ocular lesions occurred 5 days after treatment had ended, we suggest that brassinosteroids 2, 3, and 4 did not exert a direct antiviral effect in vivo, but rather may play a role in immune-mediated stromal inflammation, which would explain the improvement of the clin. signs of HSK observed
ST brassinosteroid analog prepn antiviral HSV1 conjunctiva keratitis
IT Antiviral agents

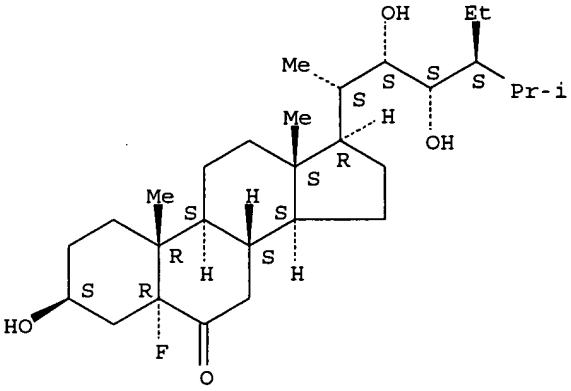
Human
Human herpesvirus 1
(antiherpetic activity of three new synthetic brassinosteroid analogs)
IT Eye
(conjunctiva; antiherpetic activity of three new synthetic brassinosteroid analogs)
IT Eye, disease
Inflammation
(keratitis; antiherpetic activity of three new synthetic brassinosteroid analogs)
IT 188127-65-3P **528870-33-9P 528870-36-2P**
RL: **PAC (Pharmacological activity)**; SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(antiherpetic activity of new synthetic **brassinosteroid** analogs)
IT 83-48-7, Stigmasterol
RL: RCT (Reactant); RACT (Reactant or reagent)
(antiherpetic activity of new synthetic brassinosteroid analogs)
IT 4092-62-0P 125113-67-9P 157556-31-5P 167958-88-5P 188127-57-3P 295358-56-4P 295358-58-6P 320341-60-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(antiherpetic activity of new synthetic brassinosteroid analogs)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; Brassinosteroids: a new class of plant hormones 1999
(2) Bajguz, A; Phytochemistry 2003, V62, P1027 HCAPLUS
(3) Carr, J; Exp Biol Med 2001, V226, P353
(4) Denizot, F; J Immunol Methods 1986, V89, P271 MEDLINE
(5) Deshpande, S; Vet Microbiol 2002, V86, P17 HCAPLUS
(6) Diebold, Y; Invest Ophthalmol Vis Sci 2003, V44, P4263
(7) Grove, M; Nature 1979, V281, P216 HCAPLUS
(8) Hendricks, R; Cornea 1997, V16, P503 MEDLINE
(9) Holbach, L; Ophthalmology 1990, V97, P722 MEDLINE
(10) Johnson, P; J Virol 1991, V65, P700 HCAPLUS
(11) Kolb, H; Chem Rev 1994, V94, P2483 HCAPLUS
(12) Liu, T; J Virol 1996, V70, P264 HCAPLUS
(13) Ponce, M; J Chem Soc Perkin Trans 2000, V2, P2351
(14) Ramirez, J; Steroids 2000, V65, P329 HCAPLUS
(15) Ramirez, J; Tetrahedron 2000, V56/34, P6171
(16) Seo, S; Eur J Immunol 2001, V31, P3318 HCAPLUS
(17) Syamala, M; J Org Chem 1992, V57, P1928 HCAPLUS
(18) Talarico, L; Med Chem Res 2002, V11, P434 HCAPLUS
(19) Thummel, C; Genes Dev 2002, V16, P3113 HCAPLUS
(20) Wachsman, M; Antiviral Chem Chemother 2000, V11, P71 HCAPLUS
(21) Wachsman, M; Antiviral Chem Chemother 2002, V13, P61 HCAPLUS
(22) Zhao, Z; Science 1998, V279, P1344 HCAPLUS
IT **528870-33-9P 528870-36-2P**
RL: **PAC (Pharmacological activity)**; SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(antiherpetic activity of new synthetic **brassinosteroid** analogs)
RN 528870-33-9 HCAPLUS
CN Stigmastan-6-one, 3,5,22,23-tetrahydroxy-, (3β,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 528870-36-2 HCAPLUS
CN Stigmastan-6-one, 5-fluoro-3,22,23-trihydroxy-, (3β,5α,22S,23S)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:964837 HCAPLUS
DN 141:374732
ED Entered STN: 12 Nov 2004
TI 24-Epibrassinolide for decreasing cholesterol level in blood
IN Khripach, Vladimir; Altsivanovich, Konstantin; Zhabinskii, Vladimir; Samusevich, Mikhail
PA Mikonik Technologies, Ltd, Belarus; Drebsk Comptech, Inc.
SO U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-365
INCL 514450000
CC 1-10 (Pharmacology)
Section cross-reference(s): 11, 18, 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004225010	A1	20041111	US 2004-710613	20040723
PRAI US 2004-710613		20040723		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

US 2004225010 ICM A61K031-365
INCL 514450000
US 2004225010 NCL 514/450.000
ECLA A23L001/30B2; A61K031/365

AB The invention discloses a method for improving blood cholesterol and its conjugates levels in a mammal, which is based on the administration of steroidal plant hormone 24-epibrassinolide.

ST epibrassinolide blood cholesterol plant hormone

IT Glycerides, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood; method for decreasing cholesterol level in blood)

IT Drug delivery systems
(capsules; method for decreasing cholesterol level in blood)

IT Diet
(cholesterol-enriched; method for decreasing cholesterol level in blood)

IT Drug delivery systems
(emulsions, aqueous; method for decreasing cholesterol level in blood)

IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(high-d.; method for decreasing cholesterol level in blood)

IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(low-d.; method for decreasing cholesterol level in blood)

IT Drug delivery systems
Hypercholesterolemia
Hypolipemic agents
Nutrition, animal
(method for decreasing cholesterol level in blood)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(method for decreasing cholesterol level in blood)

IT Drug delivery systems
(powders; method for decreasing cholesterol level in blood)

IT Drug delivery systems
(solns.; method for decreasing cholesterol level in blood)

IT Diet
(supplements; method for decreasing cholesterol level in blood)

IT Drug delivery systems
(suspensions; method for decreasing cholesterol level in blood)

IT Drug delivery systems
(tablets; method for decreasing cholesterol level in blood)

IT 57-88-5, Cholest-5-en-3-ol (3β)-, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood; method for decreasing cholesterol level in blood)

IT 1406-18-4, Vitamin E 11103-57-4, Vitamin A
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(method for decreasing cholesterol level in blood)

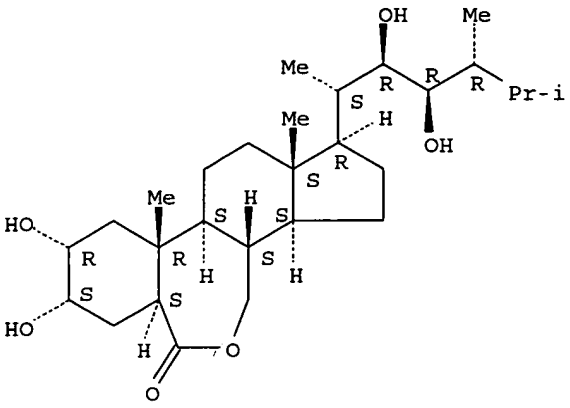
IT **78821-43-9**, 24-Epibrassinolide
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(method for decreasing cholesterol level in blood)

IT **78821-43-9**, 24-Epibrassinolide
RL: FFD (Food or feed use); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(method for decreasing cholesterol level in blood)

RN 78821-43-9 HCAPLUS

CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:586154 HCAPLUS
DN 141:150378
ED Entered STN: 22 Jul 2004
TI Inhibitors of measles virus
AU Barnard, Dale L.
CS Institute for Antiviral Research, Dept. ADVS, Utah State University, Logan, UT, USA
SO Antiviral Chemistry & Chemotherapy (2004), 15(3), 111-119
CODEN: ACCHEH; ISSN: 0956-3202
PB International Medical Press
DT Journal; General Review
LA English
CC 1-0 (Pharmacology)
Section cross-reference(s): 15
AB A review. Measles virus (MV) infections have been almost eradicated in some industrialized nations. However, MV continues to cause severe disease and mortality in the world and is responsible for clusters of exogenous-borne disease in essentially disease-free countries. Because of the ebb and flow of immunization campaigns, especially in the poverty-stricken and war-torn Third World, and the ominous potential for severe disease and mortality, it is vital that research for discovery of therapeutic countermeasures should continue. To that end, a number of compds. have been evaluated for efficacy in vitro and in animal models, and several therapeutic modalities have been tested in the clinic. The only current therapies used in the clinic include ribavirin administered orally or i.v., alone or in combination with immune serum globulin; these therapies have demonstrated variable efficacy. Therefore, drug discovery efforts have been launched to supplement the existing treatments for MV infections. Antisense mols., adenosine and guanosine nucleosides, including ring-expanded "fat" nucleoside analogs, brassinosteroids, coumarins, peptide inhibitors, modulators of cholesterol synthesis and a variety of natural products have been screened for efficacy and toxicity both in vitro and in animals. However, none of these agents has gone into human clin. trials and most will not merit further development due to toxicity concerns and/or low potency. Thus, further research is needed to develop more potent and less toxic drugs that could be used for treating MV infections to supplement the existing MV vaccine campaigns.
ST review measles virus antiviral
IT Vaccines
(MV; inhibitors of measles virus)
IT **Hormones, plant**
RL: **PAC (Pharmacological activity)**; BIOL (Biological study)
(brassinosteroids; inhibitors of measles virus)
IT Antiviral agents
Human

Measles virus
(inhibitors of measles virus)
IT Nucleoside analogs
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); BIOL (Biological study)
(inhibitors of measles virus)
IT 91-64-5D, Coumarin, derivs. 118-00-3D, Guanosine, nucleosides
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); BIOL (Biological study)
(inhibitors of measles virus)
IT 57-88-5, Cholesterol, biological studies
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); BIOL (Biological study)
(synthesis modulators; inhibitors of measles virus)
RE.CNT 86 THERE ARE 86 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Barclay, A; British Medical Journal (Clinical Research Edition) 1987, V294, P294 MEDLINE
(2) Barnard, D; Antiviral Chemistry & Chemotherapy 2001, V12, P241 HCAPLUS
(3) Barnard, D; Antiviral Chemistry & Chemotherapy 2002, V13, P39 HCAPLUS
(4) Barnard, D; Chemotherapy 1993, V39, P203 HCAPLUS
(5) Barnard, D; Chemotherapy 1993, V39, P212 HCAPLUS
(6) Barnard, D; Current Opinion in Investigational Drugs 2002, V3, P1585 HCAPLUS
(7) Bedows, E; Journal of Natural Products 1982, V45, P725 MEDLINE
(8) Bell, A; Journal of Infectious Diseases 1997, V176, P258 MEDLINE
(9) Bolt, G; Virology 1998, V252, P387 HCAPLUS
(10) Bourinbaiar, A; Acta Virologica 1993, V37, P241 HCAPLUS
(11) Carlowe, J; Nursing Standard 2003, V17, P18
(12) Carmena, J; Enfermedades Infecciosas y Microbiologia Clinica 1996, V14, P456 MEDLINE
(13) Carter, M; Progress in Brain Research 1983, V59, P163 HCAPLUS
(14) Chen, H; Nucleosides, Nucleotides & Nucleic Acids 2001, V20, P1599 HCAPLUS
(15) Clements, C; Current Topics in Microbiology & Immunology 1995, V191, P13 MEDLINE
(16) Cline, J; Applied Microbiology 1969, V18, P14 HCAPLUS
(17) Cos, P; Journal of Ethnopharmacology 2002, V79, P155 MEDLINE
(18) Cosby, S; Journal of General Virology 1989, V70, P2027
(19) Coutsoudis, A; Pediatric Infectious Disease Journal 1992, V11, P203 MEDLINE
(20) De Clercq, E; Antimicrobial Agents & Chemotherapy 1985, V28, P84 HCAPLUS
(21) De Clercq, E; Antimicrobial Agents & Chemotherapy 1991, V35, P679 HCAPLUS
(22) De Clercq, E; Biochemical & Biophysical Research Communications 1985, V129, P306 HCAPLUS
(23) De Clercq, E; Biochemical Pharmacology 1989, V38, P1771 HCAPLUS
(24) D'Souza, R; Journal of Tropical Pediatrics 2002, V48, P323
(25) Esolen, L; Journal of Virology 1995, V69, P3955 HCAPLUS
(26) Forni, A; Clinical Infectious Diseases V19, P454 MEDLINE
(27) Gay, N; Bulletin of the World Health Organization 2000, V78, P949 MEDLINE
(28) Griffin, D; Fields Virology, 3rd edition 2003, V1, P1401
(29) Gururangan, S; Journal of Infection 1990, V20, P219 MEDLINE
(30) Hayashi, T; Journal of Natural Products 1996, V59, P83 HCAPLUS
(31) Hinman, A; Annual Review of Public Health 1999, V20, P211 MEDLINE
(32) Hoppen, T; Kliniscche Padiatrie 2003, V215, P268 MEDLINE
(33) Huang, S; American Journal of Chinese Medicine 1997, V25, P89 MEDLINE
(34) Hussey, G; Journal of Tropical Pediatrics 1993, V39, P342 MEDLINE
(35) Jack, S; Evidence-Based Nursing 2004, V7, P25
(36) Jefferson, T; Vaccine 2003, V21, P3954
(37) Jin, L; Virus Research 1998, V55, P107 HCAPLUS
(38) Katayama, Y; Journal of Clinical Microbiology 1997, V35, P2651 HCAPLUS
(39) Kawashima, H; Digestive Diseases & Sciences 2000, V45, P723 MEDLINE
(40) Khor, I; Journal of Virology 2002, V76, P4412 HCAPLUS
(41) Koschel, K; Virology 1995, V207, P168 HCAPLUS
(42) Kosugi, Y; Antiviral Chemistry & Chemotherapy 1994, V5, P366 HCAPLUS
(43) Krantic, S; Journal of General Virology 1996, V76, P2793
(44) Kurokawa, M; Antiviral Research 1993, V22, P175 MEDLINE

(45) Laine, D; Journal of Virology 2003, V77, P11332 HCAPLUS
(46) Lambert, D; Proceedings of the National Academy of Sciences, USA 1996, V93, P2186 HCAPLUS
(47) Lavy, A; Digestive & Liver Disease 2001, V33, P472 MEDLINE
(48) LeDuc, J; Emerging Infectious Diseases 2002, V8, P743
(49) Lin, C; Journal of Clinical Pharmacology 2004, V44, P265 HCAPLUS
(50) Lin, Y; Planta Medica 1999, V65, P120 HCAPLUS
(51) Lobl, T; International Journal of Peptide & Protein Research 1988, V32, P326 HCAPLUS
(52) Malvoisin, E; Biochimica Biophysica Acta 1990, V1042, P359 HCAPLUS
(53) Manchester, M; Virology 2000, V274, P5 HCAPLUS
(54) McWhorter, J; North Carolina Medical Journal 1996, V57, P306 MEDLINE
(55) Miller, F; Applied Microbiology 1968, V16, P1489 HCAPLUS
(56) Naniche, D; Journal of Virology 2000, V74, P7478 HCAPLUS
(57) Nicolaides, E; Journal of Medicinal Chemistry 1968, V11, P74 MEDLINE
(58) Niizuma, S; Tetrahedron 1997, V53, P13621 HCAPLUS
(59) Patil, S; Journal of Medicinal Chemistry 1992, V35, P3372 HCAPLUS
(60) Petricevich, V; Toxicon 2003, V42, P143 HCAPLUS
(61) Robins, M; Journal of Medicinal Chemistry V35, P2283 HCAPLUS
(62) Ross, A; American Journal of Clinical Nutrition 1998, V68, P8 HCAPLUS
(63) Rota, P; Emerging Infectious Diseases 2002, V8, P902
(64) Rota, P; Journal of Infectious Diseases 2003, V187, PS270
(65) Santibanez, S; Journal of General Virology 2002, V83, P2699 HCAPLUS
(66) Schneider-Schaulies, J; Journal of Neurovirology 2003, V9, P247 HCAPLUS
(67) Schroeder, C; Acta Virologica 1986, V30, P432 HCAPLUS
(68) Sekiguchi, J; Journal of Biology & Chemistry 1996, V271, P2313 MEDLINE
(69) Seo, S; Infection Control & Hospital Epidemiology 2002, V23, P276
(70) Shaffer, J; Virology 2003, V315, P389 HCAPLUS
(71) Shigeta, S; Antimicrobial Agents & Chemotherapy 1992, V36, P435 HCAPLUS
(72) Siddiqi, S; Journal of Medicinal Chemistry 1995, V38, P1035 HCAPLUS
(73) Singh, V; Pediatric Neurology 2003, V28, P292
(74) Skulnick, H; Journal of Medicinal Chemistry 1997, V40, P1149 HCAPLUS
(75) Soldatou, A; Paediatric Respiratory Reviews 2003, V4, P193
(76) Steingart, K; Infection Control & Hospital Epidemiology 1999, V20, P115 MEDLINE
(77) Stogner, S; Southern Medical Journal 1993, V86, P1415 MEDLINE
(78) Takeuchi, K; FEBS Letters 2003, V545, P177 HCAPLUS
(79) Ubillas, R; Phytomedicine 1994, V1, P77 HCAPLUS
(80) Wachsman, M; Antiviral Chemistry & Chemotherapy 2002, V13, P61 HCAPLUS
(81) Wyde, P; Antimicrobial Agents & Chemotherapy 2000, V44, P1146 HCAPLUS
(82) Wyde, P; Antiviral Research 1995, V27, P59 HCAPLUS
(83) Wyde, P; Drug Development Research 1993, V28, P467 HCAPLUS
(84) Wyde, P; Drug Resistance Updates 1999, V2, P244 HCAPLUS
(85) Zhang, N; Bioorganic & Medicinal Chemistry Letters 2002, V12, P3391 HCAPLUS
(86) Zorzon, M; Neurological Sciences 2003, V24, P242 MEDLINE

L34 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:413878 HCAPLUS
DN 140:385420
ED Entered STN: 21 May 2004
TI Antiviral activity of natural and synthetic brassinosteroids
AU Wachsman, Monica B.; Ramirez, Javier A.; Talarico, Laura B.; Galagovsky, Lydia R.; Coto, Celia E.
CS Laboratorio de Virologia, Departamento de Quimica Biologica, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Buenos Aires, Argent.
SO Current Medicinal Chemistry: Anti-Infective Agents (2004), 3(2), 163-179
CODEN: CMCAFL; ISSN: 1568-0126
PB Bentham Science Publishers Ltd.
DT Journal; General Review
LA English
CC 1-0 (Pharmacology)
Section cross-reference(s): 11
AB A review. Since the discovery of brassinolide, a C28 steroid with an unusual lactone B-ring structure, more than 60 related compds.

-collectively known as brassinosteroids (BRs) - have been isolated from a wide variety of plant species. Exogenous application of BRs to plants at nanomolar to micromolar concns. has a broad spectrum of growth responses, such as stem elongation, inhibition of root growth, promotion of cell division and enhancement of stress resistance, brought about by changes in enzyme activity and gene expression. In the last years, biochem. and genetic anal. provided compelling evidence for an essential role of BRs in plant development. In this paper, we review our synthetic methods to obtain BRs analogs and report the scope of antiviral activity of these compds. against RNA and DNA viruses. Some of the compds. showed selectivity indexes (SI) 10- to 18- fold higher than ribavirin, a broad spectrum antiviral compound, when tested against Junin virus (JV) (Arenaviridae); a good antiviral activity against measles virus (MV) (Paramixoviridae), with SI values also higher than ribavirin used as reference drug, and a similar or lower activity against herpes simplex type 1 and 2 (HSV-1 and HSV-2) (Herpesviridae) when compared to foscarnet or acyclovir, resp. Structure activity relationship studies (SAR) are analyzed, in order to detect which stereochem., type and position of functional groups are needed to develop a selective class of virus inhibitors.

ST review antiviral natural pharmaceutical brassinosteroid structure activity

IT Antiviral agents
DNA viruses
Human
Human herpesvirus 1
Human herpesvirus 2
Junin virus
Measles virus
RNA viruses
(antiviral activity of natural and synthetic brassinosteroids)

IT Natural products, pharmaceutical
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antiviral activity of natural and synthetic **brassinosteroids**)

IT Structure-activity relationship
(antiviral; antiviral activity of natural and synthetic brassinosteroids)

IT **Hormones, plant**
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**brassinosteroids**; antiviral activity of natural and synthetic **brassinosteroids**)

RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Abe, M; Biosci Biotech Biochem 1995, V59, P176
(2) Adam, G; Brassinosteroids:steroidal plant hormones 1999, P113
(3) Alche, L; Phytother Res 2002, V16, P348 HCAPLUS
(4) Altmann, T; Planta 1999, V208, P1 HCAPLUS
(5) Anastasia, M; J Chem Soc 1986, V1, P2117
(6) Andrei, G; Antiviral Chem Chemother 1994, V5, P105 HCAPLUS
(7) Arthan, D; Phytochemistry 2002, V59, P459 HCAPLUS
(8) Back, T; Studies in Natural Products Chemistry 1995, V16, P321 HCAPLUS
(9) Beadle, J; Antiviral Chem Chemother 1998, V9, P33 HCAPLUS
(10) Benveniste, P; Ann Rev Plant Physiol 1986, V37, P275 HCAPLUS
(11) Clouse, S; Ann Rev Plant Physiol Plant Mol Biol 1998, V49, P427 HCAPLUS
(12) Clouse, S; Molecular Cell 2002, V10, P973 HCAPLUS
(13) Clouse, S; Trends Plant Sci 2001, V10, P443
(14) Comin, M; Steroids 1999, V64, P335 HCAPLUS
(15) Cutler, H; Brassinosteroids:chemistry, bioactivity and applications, ACS Symposium Series 474 1991
(16) Cutts, F; Vaccine 1999, V17, PS47
(17) Darby, G; Antiviral Chem Chemother 1995, V6(suppl 1), P54
(18) de Clercq, E; Clinical Microbiol Rev 1995, V8, P200 MEDLINE
(19) Denizot, F; J Inmunol Methods 1986, V89, P271 MEDLINE
(20) Elion, G; Am J Med 1982, V73(suppl 1a), P7
(21) Furniss, B; Vogel's textbook of practical organic chemistry 1989

(22) Galagovsky, L; Phytochemistry 2001, V58, P973 HCAPLUS
(23) Geuns, J; Phytochemistry 1978, V17, P1 HCAPLUS
(24) Grove, M; Nature 1979, V281, P216 HCAPLUS
(25) Henbest, H; J Chem Soc 1957, P4765 HCAPLUS
(26) Hutchins, R; J Org Chem 1981, V46, P5214 HCAPLUS
(27) Kamuro, Y; Brassinosteroids:steroidal plant hormones 1999, P223
(28) Khripach, V; Brassinosteroids:a new class of plant hormones 1999
(29) Koehn, F; J Org Chem 1991, V56, P1322 HCAPLUS
(30) Kohout, L; Brassinosteroids:chemistry, bioactivity and applications, ACS Symposium Series 474 1991, P56 HCAPLUS
(31) Larson, A; Antiviral Res 1981, V1, P55
(32) Lin, T; J Gen Virol 1997, V78, P767 HCAPLUS
(33) Mandava, N; Ann Rev Plant Physiol Plant Mol Biol 1988, V39, P23 HCAPLUS
(34) Mauch, D; Science 2001, V294, P1354 HCAPLUS
(35) McMorris, T; Brassinosteroids:steroidal plant hormones 1999, P69
(36) Mitsunobu, O; Synthesis 1981, V1, P1
(37) Ponce, M; J Chem Soc Perkin Trans 2000, V2, P2351
(38) Rahier, A; Target sites of fungicides action 1992
(39) Ramirez, J; Steroids 2000, V65, P329 HCAPLUS
(40) Ramirez, J; Tetrahedron 2000, V56, P6171 HCAPLUS
(41) Rozen, S; Tetrahedron Lett 1979, V20, P1823
(42) Sakurai, A; Bios Biotechnol Biochem 1997, V61, P757 HCAPLUS
(43) Sakurai, A; Brassinosteroids:steroidal plant hormones 1999
(44) Sankawa, U; Tetrahedron Lett 1978, V11, P981
(45) Schaller, H; Progress in Lipid Research 2003, V42, P163 HCAPLUS
(46) Schmidt, J; Phytochemistry 1993, V34, P391 HCAPLUS
(47) Schumacher, K; Curr Opin Cell Biol 2000, V3, P79 HCAPLUS
(48) Sharpless, K; J Org Chem 1992, V57, P2768 HCAPLUS
(49) Shigeta, S; Antiviral Chem Chemother 1998, V9, P93 HCAPLUS
(50) Sun, H; Tetrahedron 1991, V47, P1185 HCAPLUS
(51) Syamala, A; J Org Chem 1992, V57, P1928
(52) Takatsuto, S; Chem Pharm Bull 1982, V30, P4181 HCAPLUS
(53) Talarico, L; Medical Chem Res 2002, V11, P434 HCAPLUS
(54) Texeira, Z; Plant Growth Regulation 2003, V39, P1
(55) Treanor, J; Antiviral Res 1999, V44, P79 HCAPLUS
(56) Villamil, S; Antiviral Chem Chemother 1995, V6, P239 HCAPLUS
(57) Wachsman, M; Antiviral Chem Chemother 2000, V11, P71 HCAPLUS
(58) Wachsman, M; Antiviral Chem Chemother 2002, V13, P61 HCAPLUS
(59) Wachsman, M; Antiviral Res 1987, V8, P1 MEDLINE
(60) Wachsman, M; Arch Virol 1995, V143, P581
(61) Wachsman, M; Int J Antimicrob Agents, in press 2003
(62) Wachsman, M; Rev Arg Microbiol 1995, V27, P33 HCAPLUS
(63) Weissenbacher, M; Curr Top Microbiol Immunol 1987, V134, P79 MEDLINE
(64) Whitley, R; The Lancet 2001, V357, P1513 MEDLINE

L34 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:888063 HCAPLUS
DN 140:281298
ED Entered STN: 13 Nov 2003
TI On steroid part CDXVI 24-epibrassinolide at subnanomolar concentrations modulates growth and production characteristics of a mouse hybridoma
AU Franek, Frantisek; Eckschlager, Tomas; Kohout, Ladislav
CS Laboratory of Growth Regulators, Institute of Experimental Botany, Academy of Sciences of the Czech Republic, Prague, 102 27/10, Czech Rep.
SO Collection of Czechoslovak Chemical Communications (2003), 68(11), 2190-2200
CODEN: CCCCAK; ISSN: 0010-0765
PB Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic
DT Journal
LA English
CC 1-12 (Pharmacology)
Section cross-reference(s): 11, 32
AB Brassinosteroids are known to stimulate plant growth and to possess antistress activities in plants. This work was aimed at exploring possible beneficial effects of 24-epibrassinolide on cultured mammalian

cells. A mouse hybridoma was cultured either in standard serum-free medium, or in medium diluted to 30%, in which the cells underwent nutritional stress. Steady-state parameters of semicontinuous cultures conducted at 24-epibrassinolide concns. from 10-16 to 10-9 mol 1-1 were evaluated. Typical effects of the agent found both in standard and in diluted media were (i) increase in the value of mitochondrial membrane potential, (ii), drop of intracellular antibody level, (iii) increase in the fraction of the cells in the G0/G1 phase, and (iv) decrease in the fraction of the cells in the S phase. Alleviation of nutritional stress manifested itself in cultures conducted in diluted media. Viable cell d. was significantly higher (relative to control) at 24-epibrassinolide concns. 10-13 and 10-12 mol 1-1. The results of this exploratory study show that the plant hormone 24-epibrassinolide may induce perturbations in the cell division mechanism, in mitochondria performance, and in secreted protein synthesis in a mammalian cell line. At the lowest brassinosteroid concns., the number of steroid mols. in the culture was of the same order of magnitude as the number of viable cells in the culture. This implies involvement of a complex cascade mechanism, through which the steroid mol. induces alterations in gene expression leading finally to significant changes in cell culture parameters.

ST steroid epibrassinolide antistress lymphocyte hybridoma plant growth regulator; mitochondria membrane potential cell cycle antibody brassinosteroid nutritional deprivation

IT Antitumor agents
Cell cycle
Cell division
Hybridoma
Lymphocyte
Mitosis
Starvation, animal
Translation, genetic
(24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Interphase (cell cycle)
(G0-phase; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Interphase (cell cycle)
(G1-phase; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Interphase (cell cycle)
(G2-phase; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Interphase (cell cycle)
(S-phase; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Membrane potential
(biol.; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Hormones, plant
RL: PNU (Preparation, unclassified); PREP (Preparation)
(brassinosteroids; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Mitochondria
(membrane; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Membrane, biological
(mitochondrial; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(monoclonal; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT Stress, biological
(nutritional; 24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT **78821-43-9P**, 24-Epibrassinolide

RL: **DMA (Drug mechanism of action)**; **PAC (Pharmacological activity)**; PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT 57-87-4, Ergosterol
RL: RCT (Reactant); RACT (Reactant or reagent)
(24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

IT 3037-46-5P 3152-46-3P 72050-68-1P 72050-71-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

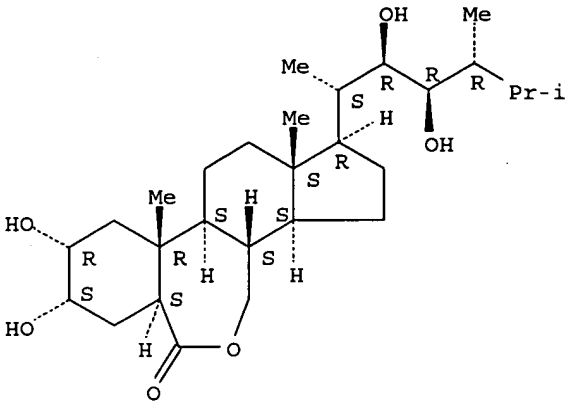
(1) Brosa, C; Tetrahedron 1999, V55, P1793 HCAPLUS
(2) Fenge, C; Cytotechnology 1991, V6, P55 MEDLINE
(3) Follstad, B; Biotechnol Prog 2002, V18, P1 HCAPLUS
(4) Follstad, B; Eur J Biochem 2000, V267, P653
(5) Franek, F; Cytotechnology 1992, V9, P117 MEDLINE
(6) Franek, F; Cytotechnology 1996, V21, P81 HCAPLUS
(7) Franek, F; Immunol Lett 1996, V52, P139 HCAPLUS
(8) Grove, M; Nature 1979, V281, P216 HCAPLUS
(9) Hiller, G; Biotechnol Bioeng 1993, V42, P185 HCAPLUS
(10) Ikekawa, N; Chem Pharm Bull 1988, V36, P405 HCAPLUS
(11) Katsumi, M; ACS Symp Ser 1991, V474, P246 HCAPLUS
(12) Khripach, V; Brassinosteroids 1993, P83
(13) Khripach, V; Brassinosteroids, A New Class of Plant Hormones 1999, P219
(14) Kohout, L; Collect Czech Chem Commun 1994, V59, P457 HCAPLUS
(15) Kohout, L; Collect Czech Chem Commun 1996, V61, P930 HCAPLUS
(16) Kohout, L; Czech Appl PCT/CZ02/0004 2002
(17) Novick, A; Science 1950, V112, P715 MEDLINE
(18) Sharpless, K; J Org Chem 1992, V57, P2768 HCAPLUS
(19) Sisa, M; Collect Czech Chem Commun 2003, V68, P2171 HCAPLUS
(20) Strnad, M; Plant Growth Regul 2003, V40, P39 HCAPLUS
(21) Thompson, M; J Org Chem 1979, V44, P5002 HCAPLUS
(22) Vivitskaya, L; Dokl Akad Nauk 1997, V352, P842
(23) Yokota, T; Phytochemistry 1987, V26, P503 HCAPLUS
(24) Zhao, Y; Brassinosteroids:Chemistry, Bioactivity and Application 1991, P26
(25) Zullo, M; Plant Growth Regul 2003, V39, P1 HCAPLUS
(26) Zurek, D; Plant Physiol 1994, V104, P161 HCAPLUS

IT **78821-43-9P**, 24-Epibrassinolide
RL: **DMA (Drug mechanism of action)**; **PAC (Pharmacological activity)**; PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(24-epibrassinolide modulates growth and production characteristics of mouse hybridoma)

RN 78821-43-9 HCAPLUS

CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4R)-2,3-dihydroxy-1,4,5-trimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:590165 HCAPLUS
DN 140:104433
ED Entered STN: 01 Aug 2003
TI Structure-activity relationship studies in a set of new brassinosteroid derivatives assayed against herpes simplex virus type 1 and 2 in cell cultures
AU Talarico, Laura B.; Ramirez, Javier A.; Galagovsky, Lydia R.; Wachsman, Monica B.
CS Laboratorio de Virologia. Departamento de Quimica Biologica, Universidad de Buenos Aires, Ciudad Universitaria, Pabellon 2, Piso 4, Buenos Aires, 1428, Argent.
SO Medicinal Chemistry Research (2002), 11(8), 434-444
CODEN: MCREEB; ISSN: 1054-2523
PB Birkhaeuser Boston
DT Journal
LA English
CC 1-3 (Pharmacology)
Section cross-reference(s): 2
AB Thirty-seven brassinosteroid derivs. were tested for their antiviral activity against herpes simplex virus (HSV) type 1 and twenty-seven against HSV type 2, via a virus yield reduction assay. Most of the assayed compds. show selectivity indexes (SI) higher than those obtained with the reference drug, stigmasterol. The compds. that possessed a better structure-activity relationship are 6b [(22S,23S)-3β-bromo-5α,22,23-trihydroxystigmastan-6-one], 7b [(22S,23S)-3β,5α,22,23-tetrahydroxystigmastan-6-one] and 12b [(22S,23S)-5α-fluor-3β,22,23-trihydroxy-stigmastan-6-one] with SI values of 100, 80 and 109 for HSV-1 and 71, 40 and 27 for HSV-2, resp.
ST brassinosteroid analog antiviral structure herpes simplex virus
IT Structure-activity relationship
(HSV inhibiting; structure-activity of brassinosteroid derivs. against HSV-1 and HSV-1)
IT Structure-activity relationship
(antiviral; structure-activity of brassinosteroid derivs. against HSV-1 and HSV-1)
IT Antiviral agents
Human
Human herpesvirus 1
Human herpesvirus 2
(structure-activity of brassinosteroid derivs. against HSV-1 and HSV-1)
IT Infection
(viral; structure-activity of brassinosteroid derivs. against HSV-1 and HSV-1)
IT 20817-72-5 81481-12-1 83509-42-6 83510-06-9
85197-40-6 90524-90-6 90524-93-9 135158-75-7

147200-28-0 157556-31-5 174656-45-2
188127-43-7 188127-46-0 188127-49-3 188127-52-8
188127-57-3 188127-61-9 188127-63-1 188127-64-2
188127-65-3 220845-39-6 295358-52-0 295358-54-2
301699-56-9 398143-21-0 398143-22-1 528870-32-8 528870-33-9
528870-34-0 528870-35-1 528870-36-2 528870-37-3
646522-44-3 646522-45-4 646522-46-5 646522-47-6
646522-48-7 646522-49-8
RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(structure-activity of brassinosteroid derivs. against HSV-1 and HSV-1)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

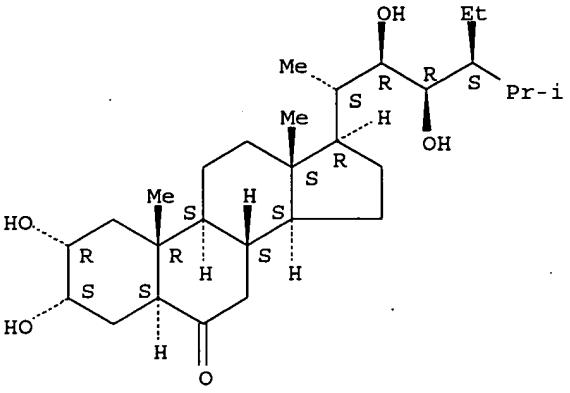
(1) Beadle, J; Antiviral Chem Chemother 1998, V9, P33 HCAPLUS
(2) Cassady, K; J Antimicrob Chemother 1997, V39, P119 HCAPLUS
(3) Clouse, S; Brassinosteroids:Chemistry, Bioactivity and Applications, ACS Symposium Series 474 1991, P122 HCAPLUS
(4) Coen, D; Proc Natl Acad Sci USA 1980, V77, P2265 HCAPLUS
(5) Denizot, F; J Immunol Methods 1986, V89, P271 MEDLINE
(6) Elion, G; Am J Med 1982, V73(Suppl 1A), P7
(7) Fisher, P; Biochim Biophys Acta 1980, V606, P235
(8) Fujioka, S; Nat Prod Rep 1997, V14, P1 HCAPLUS
(9) Heidelberger, C; Farmacol Ther 1979, V8, P427
(10) Helgstrand, E; Science 1978, V201, P819 MEDLINE
(11) Kamuro, Y; Brassinosteroids Steroidal Plant Hormones 1999, P223
(12) McMorris, T; Phytochem 1994, V36, P585 HCAPLUS
(13) Nakao, M; J Infect Dis 1984, V169, P787
(14) Oliver, N; Antimicrob Agents Chemother 1989, V33, P635 HCAPLUS
(15) Ramirez, J; Steroids 2000, V65, P329 HCAPLUS
(16) Ramirez, J; Tetrahedron 2000, V56, P6171 HCAPLUS
(17) Sidwell, R; Ribavirin, a broad spectrum antiviral agent 1980, P23 HCAPLUS
(18) Teme, C; Anales Asoc Quim Argent 1998, V86, P104
(19) Wachsman, M; Antiviral Chem Chemother 2000, V11, P71 HCAPLUS
(20) Wachsman, M; Antiviral Chem Chemother 2002, V13, P61 HCAPLUS

IT 83509-42-6 83510-06-9 90524-90-6
90524-93-9 135158-75-7 147200-28-0
174656-45-2 188127-43-7 188127-46-0
188127-61-9 188127-63-1 295358-52-0
295358-54-2 528870-33-9 528870-36-2
646522-46-5 646522-47-6 646522-48-7
646522-49-8
RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(structure-activity of brassinosteroid derivs. against HSV-1 and HSV-1)

RN 83509-42-6 HCAPLUS

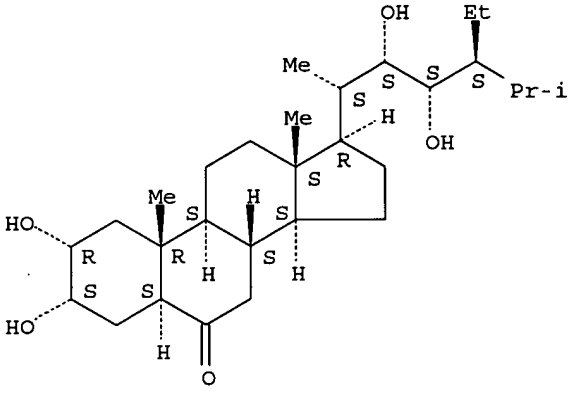
CN Stigmastan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



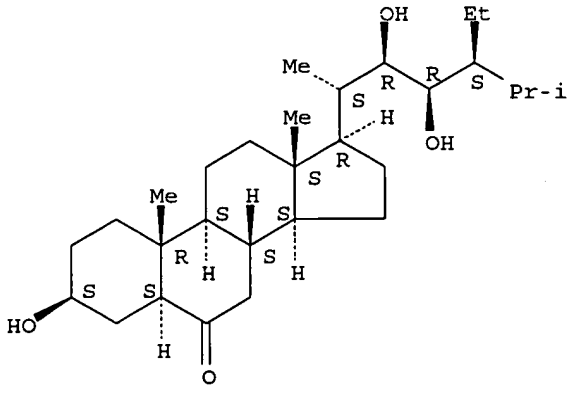
RN 83510-06-9 HCAPLUS
CN Stigmastan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 90524-90-6 HCAPLUS
CN Stigmastan-6-one, 3,22,23-trihydroxy-, (3β,5α,22R,23R)- (9CI) (CA INDEX NAME)

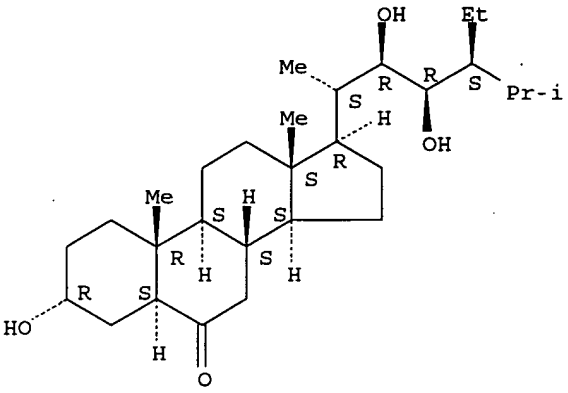
Absolute stereochemistry.



RN 90524-93-9 HCAPLUS
CN Stigmastan-6-one, 3,22,23-trihydroxy-, (3α,5α,22R,23R)- (9CI)

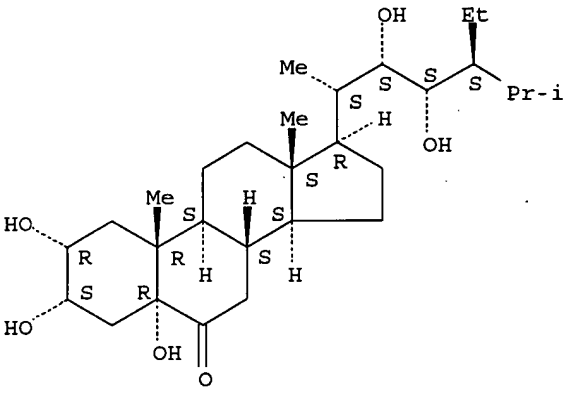
(CA INDEX NAME)

Absolute stereochemistry.



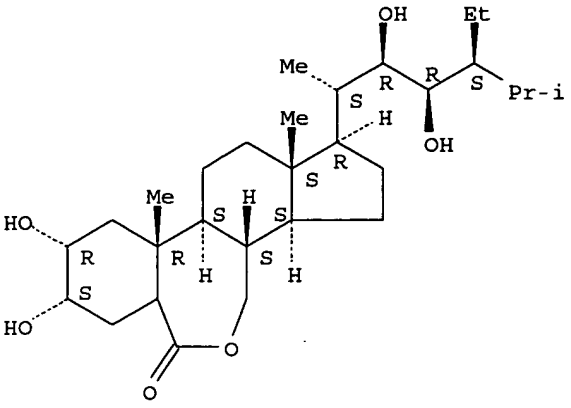
RN 135158-75-7 HCAPLUS
CN Stigmastan-6-one, 2,3,5,22,23-pentahydroxy-, (2α,3α,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



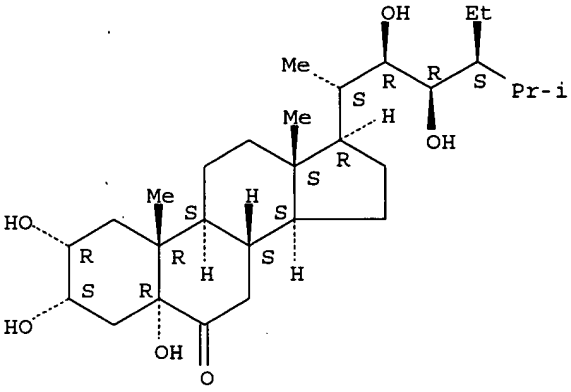
RN 147200-28-0 HCAPLUS
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-4-ethyl-2,3-dihydroxy-1,5-dimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



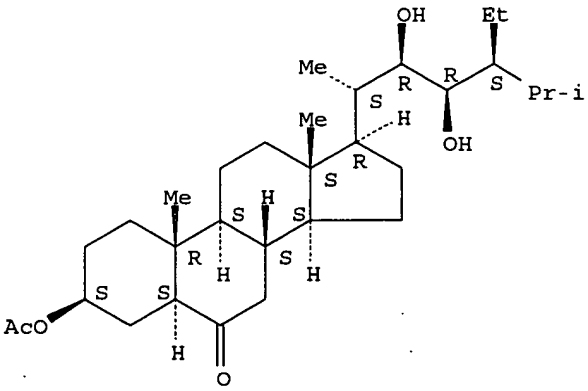
RN 174656-45-2 HCAPLUS
CN Stigmastan-6-one, 2,3,5,22,23-pentahydroxy-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 188127-43-7 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-22,23-dihydroxy-, (3β,5α,22R,23R)- (9CI) (CA INDEX NAME)

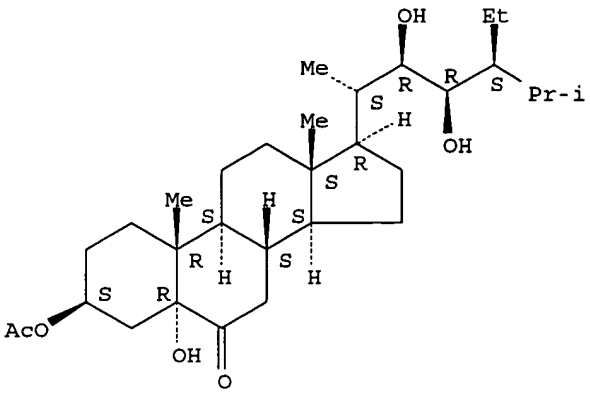
Absolute stereochemistry.



RN 188127-46-0 HCAPLUS

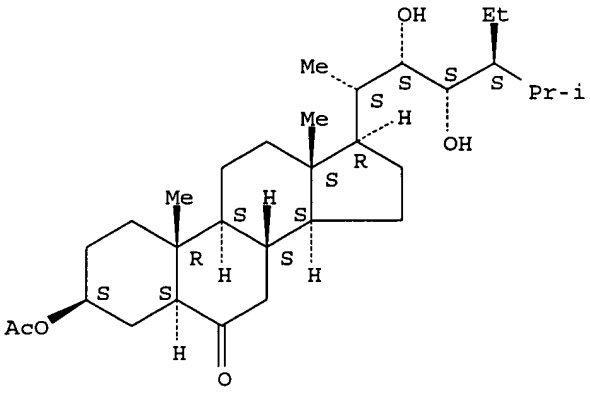
CN Stigmastan-6-one, 3-(acetyloxy)-5,22,23-trihydroxy-, (3β,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



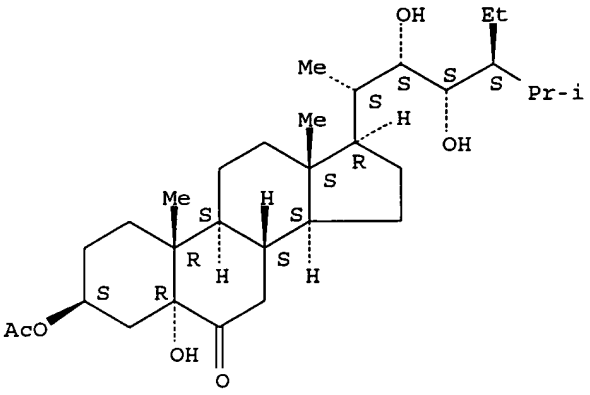
RN 188127-61-9 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-22,23-dihydroxy-, (3β,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



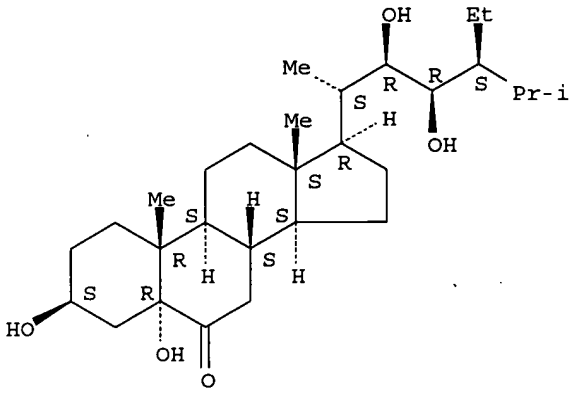
RN 188127-63-1 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-5,22,23-trihydroxy-, (3β,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



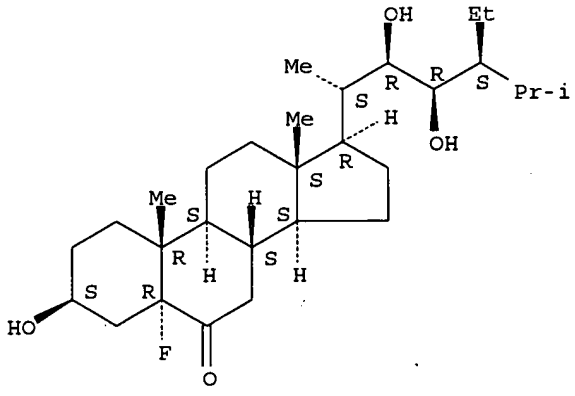
RN 295358-52-0 HCAPLUS
CN Stigmastan-6-one, 3,5,22,23-tetrahydroxy-, (3β,5α,22R,23R)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 295358-54-2 HCAPLUS
CN Stigmastan-6-one, 5-fluoro-3,22,23-trihydroxy-, (3β,5α,22R,23R)-
(9CI) (CA INDEX NAME)

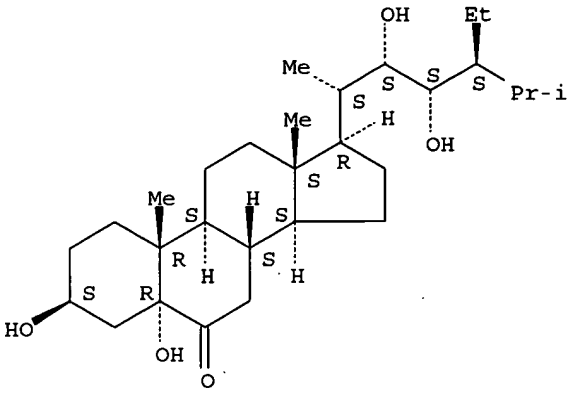
Absolute stereochemistry.



RN 528870-33-9 HCAPLUS
CN Stigmastan-6-one, 3,5,22,23-tetrahydroxy-, (3β,5α,22S,23S)-

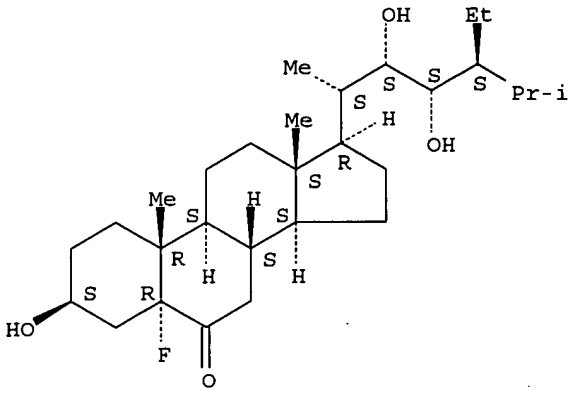
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



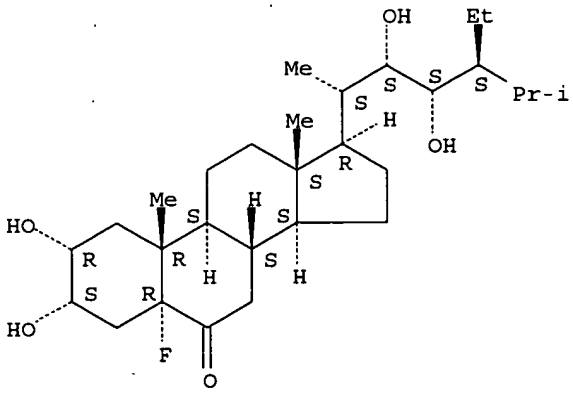
RN 528870-36-2 HCAPLUS
CN Stigmastan-6-one, 5-fluoro-3,22,23-trihydroxy-, (3β,5α,22S,23S)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



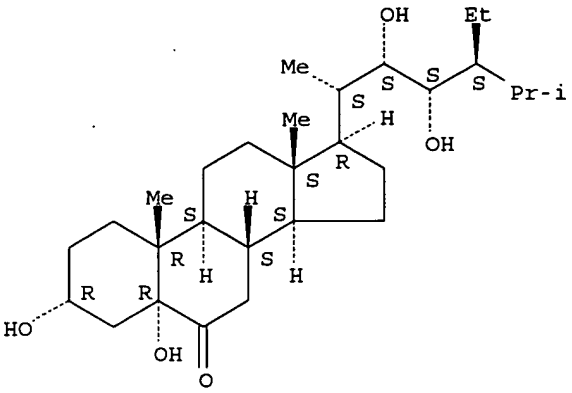
RN 646522-46-5 HCAPLUS
CN Stigmastan-6-one, 5-fluoro-2,3,22,23-tetrahydroxy-,
(2α,3α,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



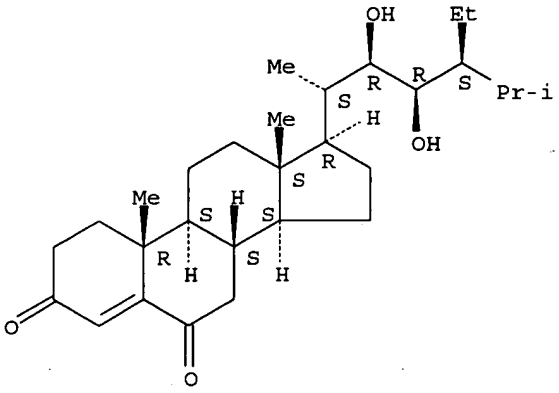
RN 646522-47-6 HCAPLUS
CN Stigmastan-6-one, 3,5,22,23-tetrahydroxy-, (3α,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



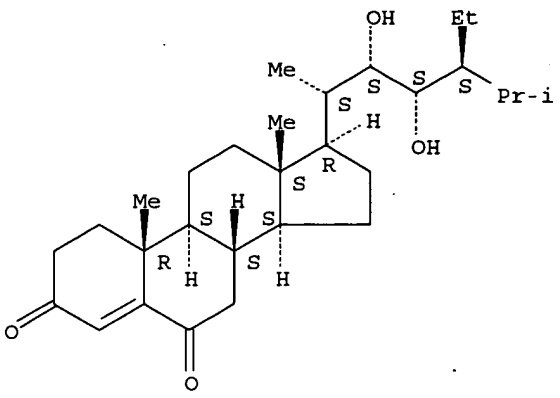
RN 646522-48-7 HCAPLUS
CN Stigmast-4-ene-3,6-dione, 22,23-dihydroxy-, (22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 646522-49-8 HCAPLUS
CN Stigmast-4-ene-3,6-dione, 22,23-dihydroxy-, (22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:829293 HCAPLUS
DN 138:395464
ED Entered STN: 31 Oct 2002
TI Antiviral activity of brassinosteroids derivatives against measles virus in cell cultures
AU Wachsman, Monica B.; Ramirez, Javier A.; Galagovsky, Lydia R.; Coto, Celia E.
CS Laboratorio de Virologia, Departamento de Quimica Biologica, Universidad de Buenos Aires, Buenos Aires, Argent.
SO Antiviral Chemistry & Chemotherapy (2002), 13(1), 61-66
CODEN: ACCHEH; ISSN: 0956-3202
PB International Medical Press
DT Journal
LA English
CC 1-5 (Pharmacology)
AB Twenty-seven brassinosteroid derivs. were tested for antiviral activity against measles virus (MV) via a virus-yield reduction assay. Compds. [(22S,23S)-3β-bromo-5α,22,23-trihydroxystigmastan-6-one], [(22R,23R)-2α,3α,22,23-tetrahydroxy-β-Homo-7-oxa-stigmastan-6-one], [(22R,23R)-3β-fluoro-22,23-dihydroxystigmastan-6-one], [(22S,23S)-3β-fluoro-5α,22,23-trihydroxystigmastan-6-one] and [(22S,23S)-5α-fluor-3β,22,23-trihydroxystigmastan-6-one], are the derivs. with good antiviral activity against MV. These SI values are higher than those obtained with ribavirin (used as reference drug). A comparative anal. of 50% cytotoxic concentration (CC50) values, using confluent non-growing cells, gives and indication of structure-activity relationship. According to their degree of cytotoxicity the compds. were divided in three groups: low, intermediate and high cytotoxicity. By observing the chemical structures of compds. belonging to the first group we can see that less cytotoxic activities are related to the presence of a 3β-hydroxy group on C-3 (ring A) and a double bond between C-22 and C-23 (side chain). The replacement of a 5α-hydroxy group by a 5α-fluoro group enhances cytotoxicity. Halogenated brassinosteroid derivs. in C-3 position are more cytotoxic than those with an acetoxy group in the same position. For 3 compds. and ribavirin, cytotoxicity measurements were also done with replicating cells; CC50 values were low, but they still competed favorably with ribavirin against MV.
ST brassinosteroid antiviral measles virus
IT Antiviral agents
Measles virus
(antiviral activity of brassinosteroids derivs. against measles virus in cell cultures)
IT **Hormones, plant**
RL: **PAC (Pharmacological activity); THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**brassinosteroids**; antiviral activity of

brassinosteroids derivs. against measles virus in cell cultures)

IT 83-48-7, Stigmasterol 36791-04-5, Ribavirin 81481-12-1
82373-95-3 83509-42-6 83510-06-9
135158-75-7 157556-31-5 **174656-45-2**
188127-43-7 188127-46-0 188127-49-3 188127-52-8
188127-57-3 **188127-61-9 188127-63-1** 188127-64-2
188127-65-3 **295358-52-0 295358-54-2** 301699-56-9
398143-22-1 528870-32-8 **528870-33-9** 528870-34-0
528870-35-1 **528870-36-2** 528870-37-3 528870-72-6
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antiviral activity of **brassinosteroids** derivs. against measles virus in cell cultures)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

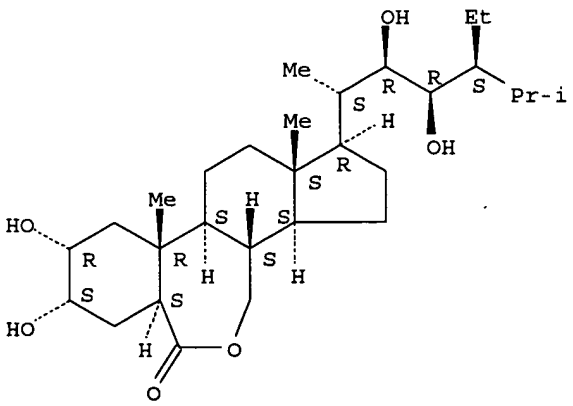
(1) Banks, G; Clinical applications of ribavirin 1980, P203
(2) Barnard, D; Antiviral Chemistry & Chemotherapy 2001, V12, P241 HCAPLUS
(3) Cutts, F; Vaccine 1999, V17, PS47
(4) De Clerq, E; Antimicrobial Agents and Chemotherapy 1991, V35, P679
(5) Denizot, F; Journal of Immunological Methods 1986, V89, P271 MEDLINE
(6) Forni, A; Clinical Infectious Disease 1994, V19, P454 MEDLINE
(7) Gururangen, S; Journal of Infectious Disease 1990, V20, P219
(8) McMorris, T; Phytochemistry 1994, V36, P585 HCAPLUS
(9) Ramirez, J; Steroids 2000, V65, P329 HCAPLUS
(10) Ramirez, J; Tetrahedron 2000, V56, P6171 HCAPLUS
(11) Ross, L; American Journal of Medicine 1984, V88, P313
(12) Shigeta, S; Antimicrobial Agents and Chemotherapy 1992, V36, P435 HCAPLUS
(13) Stogner, S; Southern Medical Journal 1993, V141, P1415
(14) Teme Centurion, O; Anales de la Asociacion Quimica Argentina 1998, V86, P104 HCAPLUS
(15) Wachsman, M; Antiviral Chemistry & Chemotherapy 2000, V11, P71 HCAPLUS
(16) Wyde, P; Antmicrobial Agents and Chemotherapy 2000, V44, P1146 HCAPLUS

IT **82373-95-3 83509-42-6 83510-06-9**
135158-75-7 174656-45-2 188127-43-7 18812
7-46-0 188127-61-9 188127-63-1
295358-52-0 295358-54-2 528870-33-9
528870-36-2
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antiviral activity of **brassinosteroids** derivs. against measles virus in cell cultures)

RN 82373-95-3 HCAPLUS

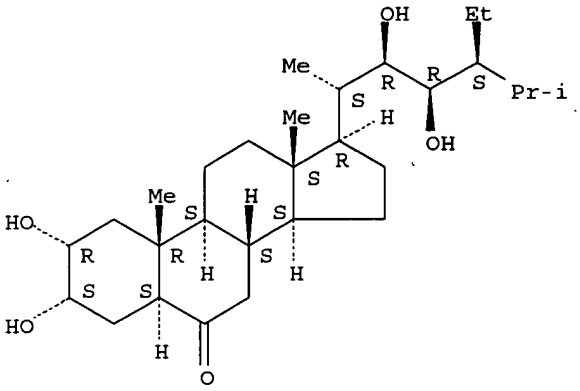
CN 6H-Benz[c]indeno[5,4-e]oxepin-6-one, 1-[(1S,2R,3R,4S)-4-ethyl-2,3-dihydroxy-1,5-dimethylhexyl]hexadecahydro-8,9-dihydroxy-10a,12a-dimethyl-, (1R,3aS,3bS,6aS,8S,9R,10aR,10bS,12aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



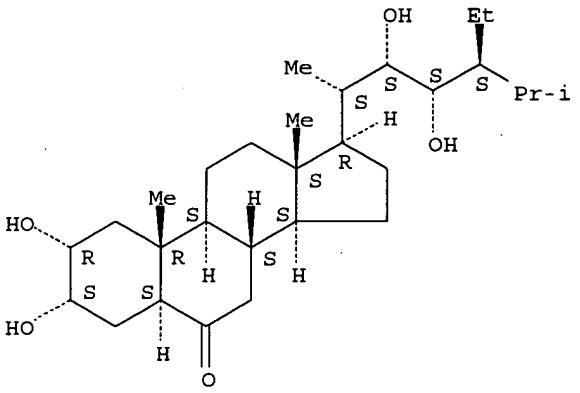
RN 83509-42-6 HCAPLUS
CN Stigmastan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



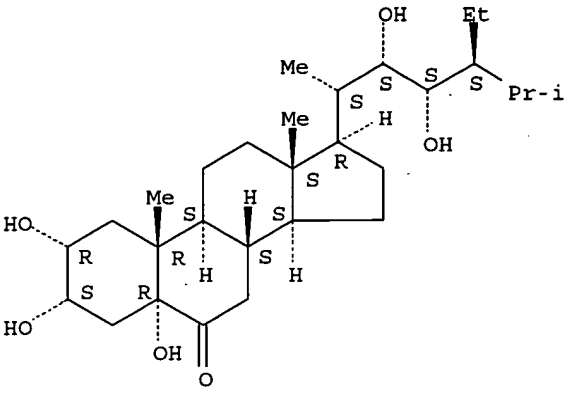
RN 83510-06-9 HCAPLUS
CN Stigmastan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



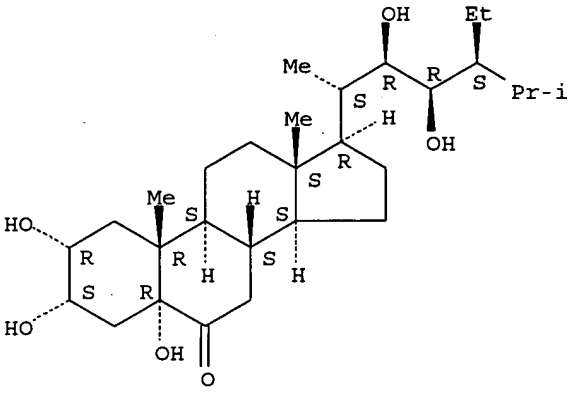
RN 135158-75-7 HCAPLUS
CN Stigmastan-6-one, 2,3,5,22,23-pentahydroxy-, (2α,3α,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



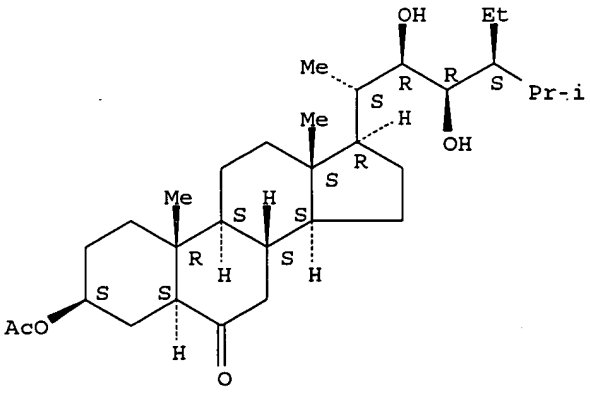
RN 174656-45-2 HCAPLUS
CN Stigmastan-6-one, 2,3,5,22,23-pentahydroxy-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 188127-43-7 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-22,23-dihydroxy-, (3β,5α,22R,23R)- (9CI) (CA INDEX NAME)

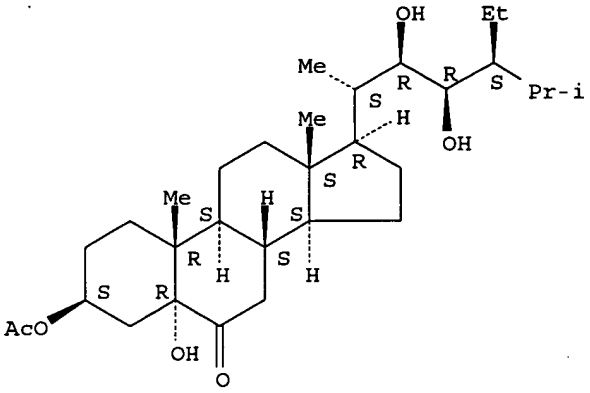
Absolute stereochemistry.



RN 188127-46-0 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-5,22,23-trihydroxy-,

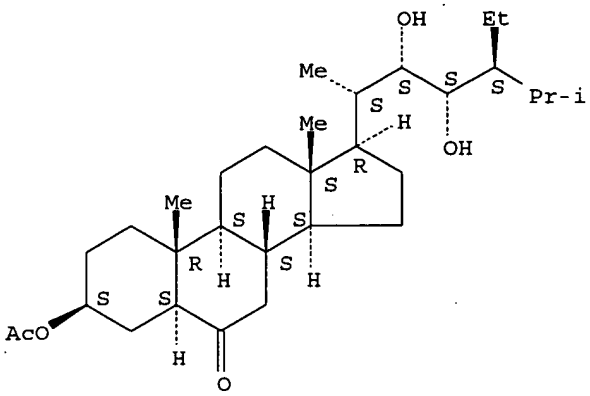
(3β,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



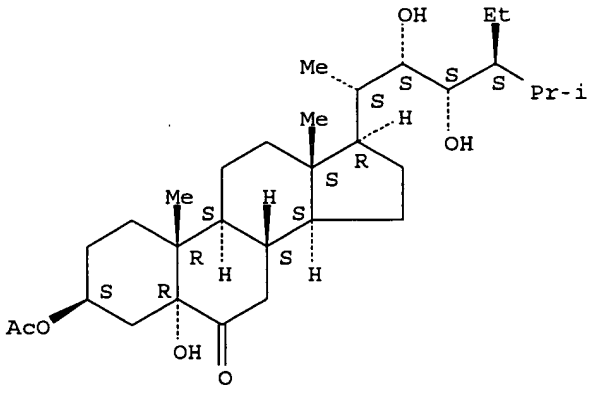
RN 188127-61-9 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-22,23-dihydroxy-, (3β,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



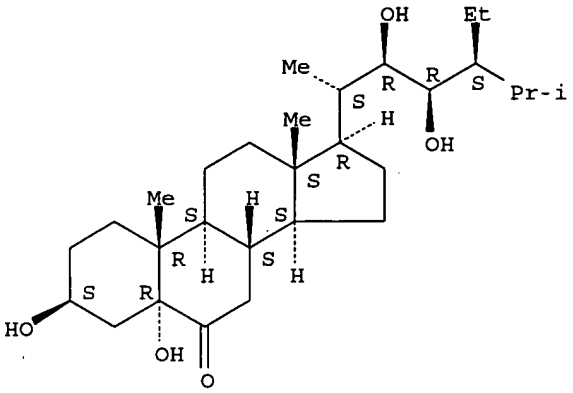
RN 188127-63-1 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-5,22,23-trihydroxy-, (3β,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



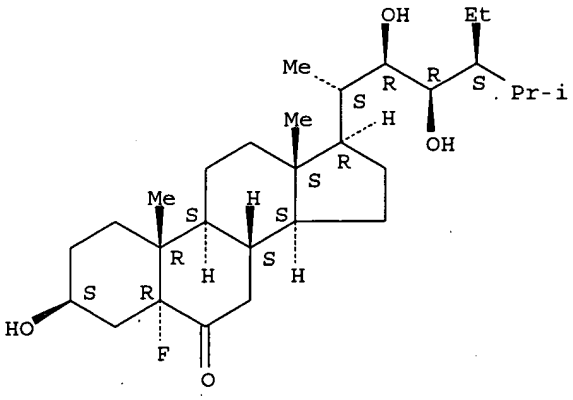
RN 295358-52-0 HCAPLUS
CN Stigmastan-6-one, 3,5,22,23-tetrahydroxy-, (3β,5α,22R,23R)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



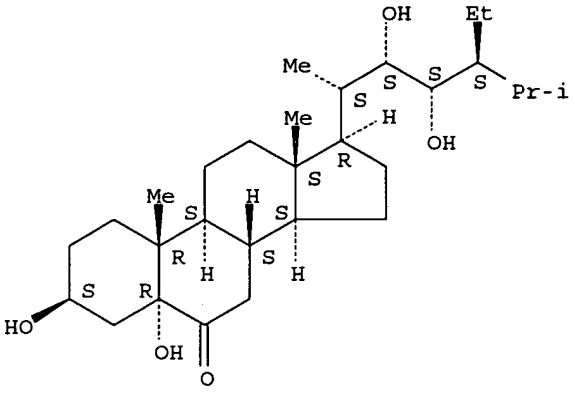
RN 295358-54-2 HCAPLUS
CN Stigmastan-6-one, 5-fluoro-3,22,23-trihydroxy-, (3β,5α,22R,23R)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



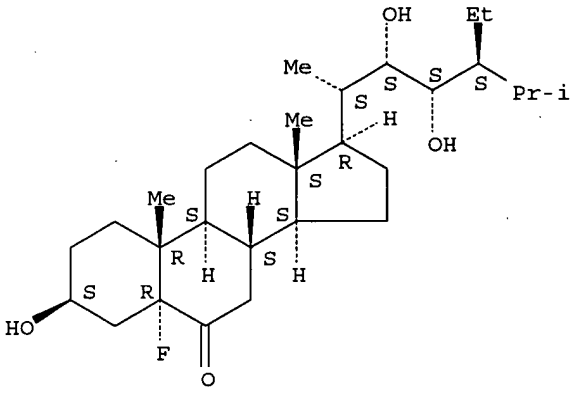
RN 528870-33-9 HCAPLUS
CN Stigmastan-6-one, 3,5,22,23-tetrahydroxy-, (3β,5α,22S,23S)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 528870-36-2 HCAPLUS
CN Stigmastan-6-one, 5-fluoro-3,22,23-trihydroxy-, (3β,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:129185 HCAPLUS
DN 132:273847
ED Entered STN: 25 Feb 2000
TI Antiviral effect of brassinosteroids against herpes virus and arenaviruses
AU Wachsman, Monica B.; Lopez, Elsa M. F.; Ramirez, Javier A.; Galagovsky, Lydia R.; Coto, Celia E.
CS Laboratorio de Virologia, Departamento de Quimica Biologica and Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Buenos Aires, 1428, Argent.
SO Antiviral Chemistry & Chemotherapy (2000), 11(1), 71-77
CODEN: ACCHEH; ISSN: 0956-3202
PB International Medical Press
DT Journal
LA English
CC 1-3 (Pharmacology)
Section cross-reference(s): 11
AB A natural brassinosteroid and a series of synthetic derivs. were found to be good inhibitors of herpes simplex virus type 1 (HSV-1) and arenavirus replication in cell culture. The synthetic compds. tested were analogs of the 24(S) ethylbrassinone. Compds. (22R,23R,24S)-2α, 3α,5α,22,23-pentahydroxy-stigmastan-6-one and (22R,23R,24S)-3β-bromo-5α,22,23-trihydroxy-stigmastan-6-one were cytotoxic at concns. of 20-40 μM. (22S,23S,24S)-

2α,3α,22,23-tetrahydroxy-5α,stigmastan-6-one, (22R,23R,24S)-3β-acetoxy-22,23-dihydroxy-5α-cholestan-6-one, (22S,23S,24S)-3β-bromo-22,23-dihydroxy-5α-chol-estan-6-one and (22S,23S,24S)-3β-bromo-5α,22,23-trihydroxy-stigmastan-6-one were the most active of the series against HSV-1, with selectivity index (SI) values (CC50/EC50) ranging from 10.6 to 16.5. The majority of the compds. were potent inhibitors of arenaviruses, (22S,23S,24S)-3β-bromo-5α,22,23-trihydroxy-stig-mastan-6-one being the most active, with SI values of 307.8 and 692.5 for Tacaribe and Junin viruses, resp. The antiviral activity of brassinosteroid derivs. was not because of direct inactivation; time-of-addition expts. suggested that a late step in HSV-1 multiplication was affected, whereas arenaviruses remained susceptible to the compds. throughout the replicative cycle.

ST natural brassinosteroid antiviral SAR HSV1; arenavirus Junin virus inhibiting brassinosteroid structure

IT Antiviral agents
Arenavirus
Human herpesvirus 1
Structure-activity relationship
(antiviral effect of brassinosteroids against HSV and arenaviruses)

IT Natural products, pharmaceutical
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antiviral effect of **brassinosteroids** against HSV and arenaviruses)

IT **Hormones, plant**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**brassinosteroids**; antiviral effect of **brassinosteroids** against HSV and arenaviruses)

IT **83509-42-6 83510-06-9 135158-75-7**
174656-45-2 188127-43-7 188127-46-0
188127-49-3 188127-52-8 **188127-61-9 188127-63-1**
188127-64-2 188127-65-3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antiviral effect of **brassinosteroids** against HSV and arenaviruses)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD

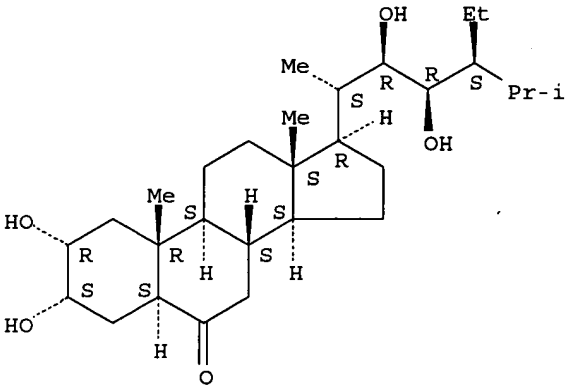
RE

(1) Albin, R; Antiviral Research 1997, V35, P139 HCAPLUS
(2) Andrei, G; Antiviral Research 1990, V14, P287 HCAPLUS
(3) Beadle, J; Antiviral Chemistry & Chemotherapy 1998, V9, P33 HCAPLUS
(4) Brosa, C; Biochemistry and Functions of Sterols 1997, P201 HCAPLUS
(5) Brosa, C; Lipids 1997, V32, P1341 HCAPLUS
(6) Caballero, G; Journal of the American Mass Spectroscopy Society 1997, V8, P270 HCAPLUS
(7) Candurra, N; Antiviral Research 1996, V31, P149 HCAPLUS
(8) Candurra, N; Journal of Medical Virology 1989, V27, P145 MEDLINE
(9) Castilla, V; International Journal of Antimicrobial Agents 1998, V10, P67 HCAPLUS
(10) Chatis, P; Antimicrobial Agents and Chemotherapy 1992, V36, P1589 HCAPLUS
(11) Denizot, F; Journal of Immunological Methods 1986, V89, P271 MEDLINE
(12) Dhaubhadel, S; Plant Molecular Biology 1999, V40, P333 HCAPLUS
(13) Elion, G; American Journal of Medicine 1982, V73(Suppl 1a), P7
(14) Enria, D; Antiviral Research 1987, V7, P353 MEDLINE
(15) Enria, D; Antiviral Research 1994, V23, P23 MEDLINE
(16) Fujioka, S; Natural Product Reports 1997, V14, P1 HCAPLUS
(17) Jacobsen, E; Journal of the American Chemical Society 1988, V110, P1968 HCAPLUS
(18) Kenyon, R; Antimicrobial Agents and Chemotherapy 1986, V29, P521 HCAPLUS
(19) McMorris, T; Lipids 1997, V32, P1303 HCAPLUS
(20) McMorris, T; Phytochemistry 1994, V36, P585 HCAPLUS

IT **83509-42-6 83510-06-9 135158-75-7**
174656-45-2 188127-43-7 188127-46-0
188127-61-9 188127-63-1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antiviral effect of **brassinosteroids** against HSV and arenaviruses)

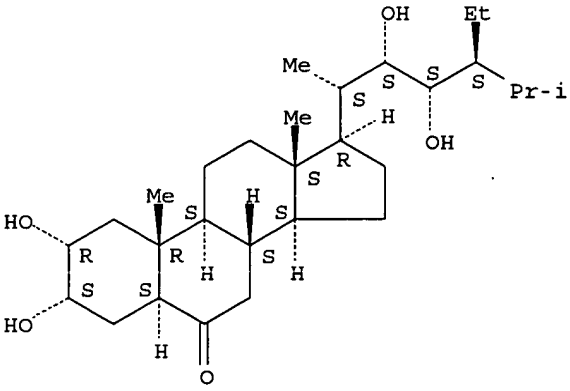
RN 83509-42-6 HCAPLUS
CN Stigmastan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



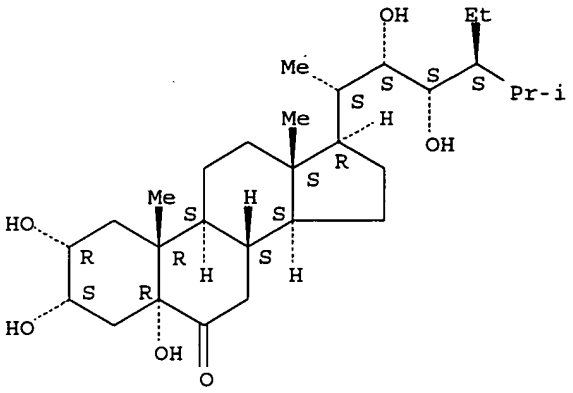
RN 83510-06-9 HCAPLUS
CN Stigmastan-6-one, 2,3,22,23-tetrahydroxy-, (2α,3α,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



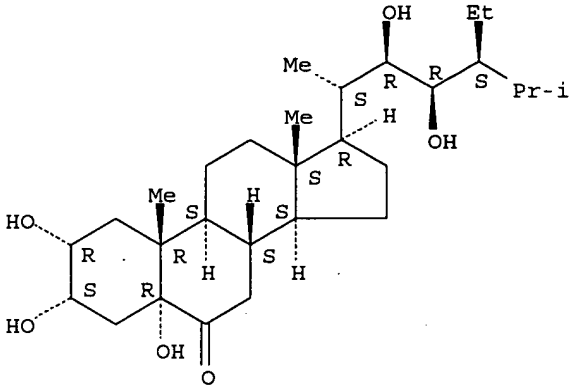
RN 135158-75-7 HCAPLUS
CN Stigmastan-6-one, 2,3,5,22,23-pentahydroxy-, (2α,3α,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



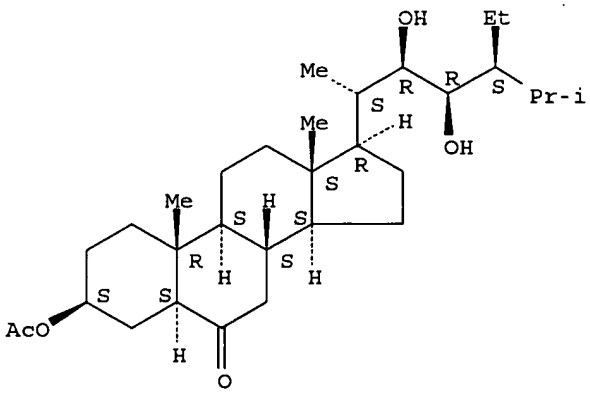
RN 174656-45-2 HCAPLUS
CN Stigmastan-6-one, 2,3,5,22,23-pentahydroxy-, (2α,3α,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 188127-43-7 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-22,23-dihydroxy-, (3β,5α,22R,23R)- (9CI) (CA INDEX NAME)

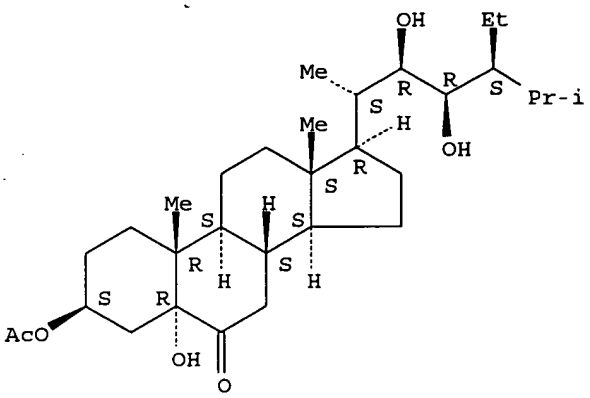
Absolute stereochemistry.



RN 188127-46-0 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-5,22,23-trihydroxy-,

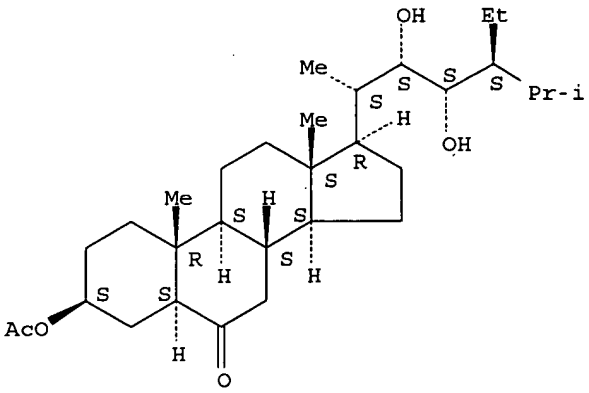
(3β,5α,22R,23R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



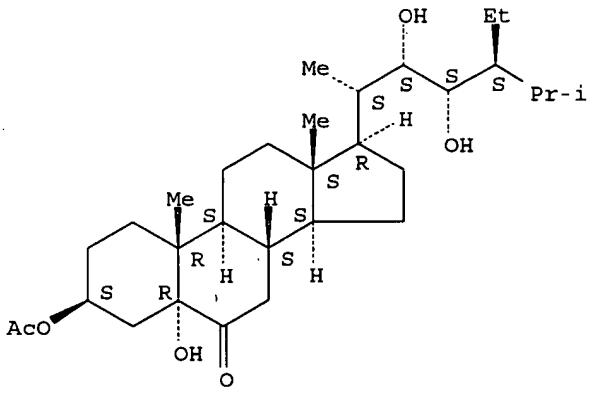
RN 188127-61-9 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-22,23-dihydroxy-, (3β,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 188127-63-1 HCAPLUS
CN Stigmastan-6-one, 3-(acetyloxy)-5,22,23-trihydroxy-, (3β,5α,22S,23S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:27929 HCAPLUS
DN 130:91278
ED Entered STN: 14 Jan 1999
TI Steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana
IN Chory, Joanne; Li, Jianming
PA The Salk Institute for Biological Studies, USA
SO PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12N005-00
ICS C12N015-00; C07H021-02; C12Q001-00; C07K001-00; C07K016-00
CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 1, 6, 11
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9859039	A1	19981230	WO 1998-US13100	19980624
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 6245969	B1	20010612	US 1997-881706	19970624
	CA 2295200	AA	19981230	CA 1998-2295200	19980624
	AU 9882623	A1	19990104	AU 1998-82623	19980624
	AU 749240	B2	20020620		
	EP 1023437	A1	20000802	EP 1998-932826	19980624
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 9810336	A	20020205	BR 1998-10336	19980624
	JP 2002508665	T2	20020319	JP 1999-505018	19980624
PRAI	US 1997-881706	A	19970624		
	WO 1998-US13100	W	19980624		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9859039	ICM	C12N005-00
	ICS	C12N015-00; C07H021-02; C12Q001-00; C07K001-00; C07K016-00
WO 9859039	ECLA	C07K014/415; C12N015/82C8; G01N033/74B
US 6245969	NCL	800/290.000; 435/007.100; 435/007.800; 435/069.100; 435/194.000; 435/320.100; 435/419.000; 435/421.000; 435/468.000; 536/023.600; 536/024.500; 800/278.000; 800/279.000; 800/286.000; 800/301.000
	ECLA	C07K014/415; C12N015/82C8; G01N033/74B

AB A novel plant steroid receptor, Bin1, is provided, as well as polynucleotides encoding Bin1. Bin1 polypeptide is useful in promoting increased plant yield and/or increased plant biomass. Arabidopsis dwarf mutants were identified that were unable to respond to exogenously added brassinosteroid, a phenotype that might be expected for brassinosteroid signaling mutants. All mutations defined alleles of a single previously described gene, BRI1. BRI1 was cloned and its expression pattern examined It encodes a ubiquitously expressed putative receptor kinase. The extracellular domain contains 25 tandem leucine-rich repeats that resemble repeats found in animal hormone receptors, plant disease resistance genes, and genes involved in unknown signaling pathways controlling plant development. Thus, genetically modified plants characterized as having increased yield and methods for producing such plants are provided, as are

transgenic animals in which oocyte maturation is stimulated.
ST Arabidopsis receptor kinase BIN1 cDNA sequence; brassinosteroid signal transduction Arabidopsis receptor kinase
IT Chromosome
(Arabidopsis thaliana 4, gene mapping on; steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT Gene, plant
RL: AGR (Agricultural use); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(BRI1; steroid receptor kinase BIN1 involved in **brassinosteroid** signal transduction from Arabidopsis thaliana)
IT Steroid receptors
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(Bin1; steroid receptor kinase BIN1 involved in **brassinosteroid** signal transduction from Arabidopsis thaliana)
IT Promoter (genetic element)
RL: AGR (Agricultural use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(FMV35S or CaMV35S or pathogen infection-induced; steroid receptor kinase BIN1 involved in **brassinosteroid** signal transduction from Arabidopsis thaliana)
IT Hormones, plant
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(brassinosteroids; steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT cDNA sequences
(for leucine-rich repeat steroid receptor kinase Bin1 from Arabidopsis thaliana)
IT Genetic mapping
(gene mapping on Arabidopsis chromosome 4; steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT Disease resistance, plant
Oogenesis
(genetic engineering for; steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT Animal cell
(mammalian, transgenic; steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT Protein sequences
(of leucine-rich repeat steroid receptor kinase Bin1 from Arabidopsis thaliana)
IT Arabidopsis thaliana
Genetic engineering
Signal transduction, biological
(steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT Antisense DNA
RL: AGR (Agricultural use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(steroid receptor kinase BIN1 involved in **brassinosteroid** signal transduction from Arabidopsis thaliana)
IT Antibodies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT Plant cell
Seed
(transgenic; steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT 197181-05-8 219306-79-3 219315-26-1
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); **THU**

(Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
IT 196526-86-0, GenBank AF017056
RL: AGR (Agricultural use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; steroid receptor kinase BIN1 involved in brassinosteroid signal transduction from Arabidopsis thaliana)
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Li; Cell 1997, V90, P929 HCAPLUS

L34 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1936:63968 HCAPLUS
DN 30:63968
OREF 30:8527b-d
ED Entered STN: 16 Dec 2001
TI Some new compounds of hexamethylenetetramine
AU Bouchereau, P.
SO Journal de Pharmacie et de Chimie (1936), 23, 549-56
CODEN: JPHCA9; ISSN: 0368-3591
DT Journal
LA Unavailable
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB Neutral or feebly alkaline derivs. of C6H12N4 (X), e. g., diphenate (cf. B. in Douris and Beytout, C. A. 17, 1621) are no longer caustic, toxicity is greatly lessened and the bactericidal or other action of, e. g., the phenol constituent is much increased; i. e., the action of the complexes is sp. (CaCl2)X.2H2O, crystalline, is formed by precipitation of concentrated solution of X with hot CaCl2 solution; at 75-80°, HCHO is given off without m.; it is soluble in H2O, little soluble in alc., insol. in Et2O. Assay methods are given; an accurate method of determining X is based on precipitating the nearly insol. compound (HgCl2)2X.H2O (Del.acte.epine). The CaCl2 compound is an active diuretic, hemostatic and recalcifiant in pulmonary tuberculosis. (MgCl2)2X.H2O is soluble in 5.5 parts H2O at 15°; it is antiseptic, a sedative in liver troubles and a wound antiseptic. (MgS2O3)2X.H2O, crystalline, is soluble in H2O. In the assay for X by HgCl2, a brown color of the precipitate causes a slight error.
IT Pharmaceutical preparations
(hexamethylenetetramine compds.)
IT Calcium chloride, compound with hexamethylenetetramine
Magnesium thiosulfate, compound with hexamethylenetetramine
IT 100-97-0, Hexamethylenetetramine
(compds. of)
IT 4015-89-8, Mercury chloride, HgCl2, compound with hexamethylenetetramine
859193-53-6, Magnesium chloride, compound with hexamethylenetetramine
(preparation of)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L55 ANSWER 1 OF 14 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 2004515206 EMBASE

TI In vitro and in vivo antiherpetic activity of three new synthetic **brassinosteroid** analogues.
AU Michelini F.M.; Ramirez J.A.; Berra A.; Galagovsky L.R.; Alche L.E.
CS lalche@qb.fcen.uba.ar
SO Steroids, (2004) Vol. 69, No. 11-12, pp. 713-720.
Refs: 22
ISSN: 0039-128X CODEN: STEDAM
PUI S 0039-128X(04)00141-2
CY United States
DT Journal; Article
FS 004 Microbiology
030 Pharmacology
037 Drug Literature Index
LA English
SL English
ED Entered STN: 20041230
Last Updated on STN: 20041230
AB **Brassinosteroids** are a novel group of steroids that appear to be ubiquitous in plants and are essential for normal plant growth and development. It has been previously reported that **brassinosteroid** analogues exert an antiviral activity against herpes simplex virus type 1 (HSV-1) and arenaviruses. In the present study, we report the chemical synthesis of compounds (22S,23S)-3β-bromo-5α,22,23-trihydroxystigmastan-6-one (2), (22S,23S)-5α-fluoro-3β-22,23-trihydroxystigmastan-6-one (3), (22S,23S)-3β,5α,22,23-tetrahydroxy-stigmastan-6-one (4) as well as their antiherpetic activity both in a human conjunctive cell line (IOBA-NHC) and in the murine herpetic stromal keratitis (HSK) experimental model. All compounds prevented HSV-1 multiplication in NHC cells in a dose dependent manner when added after infection with no cytotoxicity. Administration of compounds 2, 3, and 4 to the eyes of mice at 1, 2, and 3 days post-infection delayed and reduced the incidence of HSK, consisting mainly of inflammation, vascularization, and necrosis, compared to untreated, infected mice. However, viral titers of eye washes showed no differences among samples from treated and untreated mice. Since the decrease in the percentage of mice with ocular lesions occurred 5 days after treatment had ended, we suggest that **brassinosteroids** 2, 3, and 4 did not exert a direct antiviral effect in vivo, but rather may play a role in immune-mediated stromal inflammation, which would explain the improvement of the clinical signs of HSK observed.
CT Medical Descriptors:
*drug synthesis
in vitro study
in vivo study
stomatitis
antiviral activity
cell line
cytotoxicity
Herpes simplex virus 1
virus infection: ET, etiology
inflammation
vascularization
necrosis
comparative study
eye injury
sample
morbidity
dose response
cell division
immune mediated injury
human
nonhuman
male
mouse
human cell

animal cell
article
Drug Descriptors:
***brassinosteroid: PD, pharmacology**
3beta bromo 5alpha 22,23 trihydroxystigmastan 6 one: PD, pharmacology
5alpha fluoro 3beta 22,23 trihydroxystigmastan 6 one: PD, pharmacology
3beta,5alpha,22,23 tetrahydroxystigmastan 6 one: PD, pharmacology
antivirus agent: PD, pharmacology
steroid: PD, pharmacology
unclassified drug

L55 ANSWER 2 OF 14 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN **2004280593** EMBASE
TI Antiviral activity of natural and synthetic **brassinosteroids.**
AU Wachsman M.B.; Ramirez J.A.; Talarico L.B.; Galagovsky L.R.; Coto C.E.
CS M.B. Wachsman, Laboratorio de Virologia, Departamento de Quimica Biologica, Universidad de Buenos Aires, Pabellon 2, Piso 4, 1428 Buenos Aires, Argentina. wachsman@qb.fcen.uba.ar
SO Current Medicinal Chemistry: Anti-Infective Agents, (2004) Vol. 3, No. 2, pp. 163-179.
Refs: 64
ISSN: 1568-0126 CODEN: CMCAFL
CY Netherlands
DT Journal; General Review
FS 004 Microbiology
030 Pharmacology
037 Drug Literature Index
LA English
SL English
ED Entered STN: 20040722
Last Updated on STN: 20040722
AB Since the discovery of brassinolide, a C(28) steroid with an unusual lactone B-ring structure, more than 60 related compounds -collectively known as **brassinosteroids** (BRs) - have been isolated from a wide variety of plant species. Exogenous application of BRs to plants at nanomolar to micromolar concentrations has a broad spectrum of growth responses, such as stem elongation, inhibition of root growth, promotion of cell division and enhancement of stress resistance, brought about by changes in enzyme activity and gene expression. In the last years, biochemical and genetic analysis provided compelling evidence for an essential role of BRs in plant development. In this paper, we review our synthetic methods to obtain BRs analogues and report the scope of antiviral activity of these compounds against RNA and DNA viruses. Some of the compounds showed selectivity indexes (SI) 10- to 18- fold higher than ribavirin, a broad spectrum antiviral compound, when tested against Junin virus (JV) (Arenaviridae); a good antiviral activity against measles virus (MV) (Paramixoviridae), with SI values also higher than ribavirin used as reference drug, and a similar or lower activity against herpes simplex type 1 and 2 (HSV-1 and HSV-2) (Herpesviridae) when compared to foscarnet or acyclovir, respectively. Structure activity relationship studies (SAR) are analyzed, in order to detect which stereochemistry, type and position of functional groups are needed to develop a selective class of virus inhibitors. .COPYRGT. 2004 Bentham Science Publishers Ltd.
CT Medical Descriptors:
antiviral activity
drug isolation
plant
stem elongation
root growth
cell division
plant stress
enzyme activity
gene expression

chemical analysis
genetic analysis
plant development
RNA virus
DNA virus
drug selectivity
Junin virus
Arenavirus
Measles virus
Paramyxovirus
Herpes simplex virus 1
Herpes simplex virus 2
structure activity relation
stereochemistry
drug classification
drug synthesis
nonhuman
review
Drug Descriptors:
***brassinosteroid: AN, drug analysis**
***brassinosteroid: DV, drug development**
***brassinosteroid: PD, pharmacology**
lactone
ribavirin: CM, drug comparison
ribavirin: PD, pharmacology
foscarnet: CM, drug comparison
foscarnet: PD, pharmacology
aciclovir: CM, drug comparison
aciclovir: PD, pharmacology
epoxide: AN, drug analysis
epoxide: DV, drug development
phytosterol: DV, drug development
phytosterol: PD, pharmacology
orthoesterol A: DV, drug development
orthoesterol A: PD, pharmacology
orthoesterol B: DV, drug development
orthoesterol B: PD, pharmacology
orthoesterol C: DV, drug development
orthoesterol C: PD, pharmacology
weibensterol A: DV, drug development
weibensterol A: PD, pharmacology
weibensterol B: DV, drug development
weibensterol B: PD, pharmacology
brassinolide: AN, drug analysis
brassinolide: CM, drug comparison
brassinolide: DV, drug development
brassinolide: PD, pharmacology
stigmasterol: AN, drug analysis
stigmasterol: DV, drug development
2 alpha 3 alpha 22,23 tetrahydroxy 5 alpha stigmastan 6 one: AN, drug analysis
2 alpha 3 alpha 22,23 tetrahydroxy 5 alpha stigmastan 6 one: CM, drug comparison
2 alpha 3 alpha 22,23 tetrahydroxy 5 alpha stigmastan 6 one: DV, drug development
2 alpha 3 alpha 22,23 tetrahydroxy 5 alpha stigmastan 6 one: PD, pharmacology
2 alpha 3 alpha 22,23 tetrahydroxy homo 7 oxastigmastan 6 one: AN, drug analysis
2 alpha 3 alpha 22,23 tetrahydroxy homo 7 oxastigmastan 6 one: CM, drug comparison
2 alpha 3 alpha 22,23 tetrahydroxy homo 7 oxastigmastan 6 one: DV, drug development
2 alpha 3 alpha 22,23 tetrahydroxy homo 7 oxastigmastan 6 one: PD, pharmacology
2,3,22,23 bisacetyliden 2 alpha 3 alpha 22,23 tetrahydroxy 5 alpha

sigmastan 6 one: AN, drug analysis
2,3,22,23 bisacetyliden 2 alpha 3 alpha 22,23 tetrahydroxy 5 alpha sigmastan 6 one: CM, drug comparison
2,3,22,23 bisacetyliden 2 alpha 3 alpha 22,23 tetrahydroxy 5 alpha sigmastan 6 one: DV, drug development
2,3,22,23 bisacetyliden 2 alpha 3 alpha 22,23 tetrahydroxy 5 alpha sigmastan 6 one: PD, pharmacology
2 alpha 3 alpha dihydroxy 5 alpha stigmast 22 en 6 one: AN, drug analysis
2 alpha 3 alpha dihydroxy 5 alpha stigmast 22 en 6 one: CM, drug comparison
2 alpha 3 alpha dihydroxy 5 alpha stigmast 22 en 6 one: DV, drug development
2 alpha 3 alpha dihydroxy 5 alpha stigmast 22 en 6 one: PD, pharmacology
2 alpha 3 alpha dihydroxy 6 alpha fluoro 5 alpha stigmast 22 ene: AN, drug analysis
2 alpha 3 alpha dihydroxy 6 alpha fluoro 5 alpha stigmast 22 ene: CM, drug comparison
2 alpha 3 alpha dihydroxy 6 alpha fluoro 5 alpha stigmast 22 ene: DV, drug development
2 alpha 3 alpha dihydroxy 6 alpha fluoro 5 alpha stigmast 22 ene: PD, pharmacology
3 beta acetoxy 22,23 dihydroxy 5 alpha stigmastan 6 one: AN, drug analysis
3 beta acetoxy 22,23 dihydroxy 5 alpha stigmastan 6 one: CM, drug comparison
3 beta acetoxy 22,23 dihydroxy 5 alpha stigmastan 6 one: DV, drug development
3 beta acetoxy 22,23 dihydroxy 5 alpha stigmastan 6 one: PD, pharmacology
3 beta acetoxy 22,23 trihydroxy 5 alpha stigmastan 6 one: AN, drug analysis
3 beta acetoxy 22,23 trihydroxy 5 alpha stigmastan 6 one: CM, drug comparison
3 beta acetoxy 22,23 trihydroxy 5 alpha stigmastan 6 one: DV, drug development
3 beta acetoxy 22,23 trihydroxy 5 alpha stigmastan 6 one: PD, pharmacology
3 alpha 22,23 trihydroxy 5 alpha stigmastan 6 one: CM, drug comparison
3 alpha 22,23 trihydroxy 5 alpha stigmastan 6 one: PD, pharmacology
3 alpha fluoro 22,23 dihydroxy 5 alpha stigmastan 6 one: AN, drug analysis
3 alpha fluoro 22,23 dihydroxy 5 alpha stigmastan 6 one: CM, drug comparison
3 alpha fluoro 22,23 dihydroxy 5 alpha stigmastan 6 one: DV, drug development
3 alpha fluoro 22,23 dihydroxy 5 alpha stigmastan 6 one: PD, pharmacology
2 alpha 3 alpha 5 alpha 22,23 pentahydroxystigmatan 6 one: AN, drug analysis
2 alpha 3 alpha 5 alpha 22,23 pentahydroxystigmatan 6 one: CM, drug comparison
2 alpha 3 alpha 5 alpha 22,23 pentahydroxystigmatan 6 one: DV, drug development
2 alpha 3 alpha 5 alpha 22,23 pentahydroxystigmatan 6 one: PD, pharmacology
3 beta acetoxy 5 alpha 22,23 trihydrostigmastan 6 one: AN, drug analysis
3 beta acetoxy 5 alpha 22,23 trihydrostigmastan 6 one: CM, drug comparison
3 beta acetoxy 5 alpha 22,23 trihydrostigmastan 6 one: DV, drug development
3 beta acetoxy 5 alpha 22,23 trihydrostigmastan 6 one: PD, pharmacology
3 beta bromo 5 alpha hydroxystigmast 22 en 6 one: AN, drug analysis
3 beta bromo 5 alpha hydroxystigmast 22 en 6 one: CM, drug comparison
3 beta bromo 5 alpha hydroxystigmast 22 en 6 one: DV, drug development
3 beta bromo 5 alpha hydroxystigmast 22 en 6 one: PD, pharmacology
3 beta bromo 5 alpha 22,23 trihydroxystigmastan 6 one: AN, drug analysis

3 beta bromo 5 alpha 22,23 trihydroxystigmastan 6 one: CM, drug comparison
3 beta bromo 5 alpha 22,23 trihydroxystigmastan 6 one: DV, drug development
3 beta bromo 5 alpha 22,23 trihydroxystigmastan 6 one: PD, pharmacology
3 beta fluoro 5 alpha 22,23 trihydroxystigmastan 6 one: AN, drug analysis
3 beta fluoro 5 alpha 22,23 trihydroxystigmastan 6 one: CM, drug comparison
3 beta fluoro 5 alpha 22,23 trihydroxystigmastan 6 one: DV, drug development
3 beta fluoro 5 alpha 22,23 trihydroxystigmastan 6 one: PD, pharmacology
3 beta 5 alpha dihydroxystigmast 22 en 6 one: AN, drug analysis
3 beta 5 alpha dihydroxystigmast 22 en 6 one: CM, drug comparison
3 beta 5 alpha dihydroxystigmast 22 en 6 one: DV, drug development
3 beta 5 alpha dihydroxystigmast 22 en 6 one: PD, pharmacology
unindexed drug

CT Drug Descriptors:
unclassified drug

RN (lactone) 1338-03-0; (ribavirin) 36791-04-5; (foscarnet) 4428-95-9; (aciclovir) 59277-89-3; (brassinolide) **72962-43-7**; (stigmasterol) 83-48-7

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AN **2004032208** EMBASE

TI Steroid-hormone rapid actions, membrane receptors and a conformational ensemble model.

AU Norman A.W.; Mizwicki M.T.; Norman D.P.G.

CS A.W. Norman, Department of Biochemistry, University of California, Riverside, CA 92521, United States. Anthony.norman@ucr.edu

SO Nature Reviews Drug Discovery, (2004) Vol. 3, No. 1, pp. 27-41.
Refs: 118
ISSN: 1474-1776 CODEN: NRDDAG

CY United Kingdom

DT Journal; General Review

FS 003 Endocrinology
029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index

LA English

SL English

ED Entered STN: 20040129
Last Updated on STN: 20040129

AB Steroid hormones can act as chemical messenger in a wide range od species and target tissues to produce both slow genomic responses, and rapid non-genomic responses. Although it is clear that genomic responses to steroid hormones are mediated by the formation of a complex of the hormone and its cognate steroid-hormone nuclear receptor, new evidence indicates that rapid responses are mediated by a variety of receptor types associated with the plasma membrane or its caveolae components, potentially including a membrane-associated nuclear receptor. This review summarizes our current knowledge of membrane-associated steroid receptors, as well as details of structure-function relationships between steroid hormones and the ligand-binding domains of their nuclear and membrane-associated receptors. Furthermore, a new receptor conformational ensemble model is presented that suggests how the same receptor could produce both rapid and genomic responses. It is apparent that there is a cornucopia of new drug development opportunities in these areas.

CT Medical Descriptors:
hormone action
protein function
conformational transition
genomics
complex formation
cell membrane

caveola
structure activity relation
ligand binding
protein domain
tissue distribution
drug targeting
protein targeting
drug receptor binding
binding affinity
human
nonhuman
human cell
animal cell
review
priority journal
Drug Descriptors:
*steroid hormone: AN, drug analysis
***steroid hormone: PD, pharmacology**
*membrane receptor: EC, endogenous compound
*steroid receptor: EC, endogenous compound
cell nucleus receptor: EC, endogenous compound
estradiol: AN, drug analysis
estradiol: PD, pharmacology
androgen: AN, drug analysis
androgen: PD, pharmacology
alfacalcidol: AN, drug analysis
alfacalcidol: PD, pharmacology
glucocorticoid: AN, drug analysis
glucocorticoid: PD, pharmacology
mineralocorticoid: AN, drug analysis
mineralocorticoid: PD, pharmacology
thyroid hormone: AN, drug analysis
thyroid hormone: PD, pharmacology
peroxisome proliferator activated receptor: EC, endogenous compound
retinoid: AN, drug analysis
retinoid: PD, pharmacology
brassinosteroid: AN, drug analysis
brassinosteroid: PD, pharmacology
testosterone: AN, drug analysis
testosterone: PD, pharmacology
progesterone: AN, drug analysis
progesterone: PD, pharmacology
hydrocortisone: AN, drug analysis
hydrocortisone: PD, pharmacology
aldosterone: AN, drug analysis
aldosterone: PD, pharmacology
retinoic acid: AN, drug analysis
retinoic acid: PD, pharmacology
liothyronine: AN, drug analysis
liothyronine: PD, pharmacology
ecdysone: AN, drug analysis
ecdysone: PD, pharmacology
brassinolide: AN, drug analysis
brassinolide: PD, pharmacology
ethinylestradiol: AN, drug analysis
ethinylestradiol: PD, pharmacology
vitamin D: AN, drug analysis
vitamin D: PD, pharmacology
RN (estradiol) 50-28-2; (alfacalcidol) 41294-56-8; (testosterone) 58-22-0; (progesterone) 57-83-0; (hydrocortisone) 50-23-7; (aldosterone) 52-39-1, 6251-69-0; (retinoic acid) 302-79-4; (liothyronine) 6138-47-2, 6893-02-3; (brassinolide) 72962-43-7; (ethinylestradiol) 57-63-6

L55 ANSWER 4 OF 14 EMBASE
on STN
AN 2003369601 EMBASE

TI Structure-activity relationship studies in a set of new **brassinosteroid** derivatives assayed against herpes simplex virus type 1 and 2 in cell cultures.
AU Talarico L.B.; Ramirez J.A.; Galagovsky L.R.; Wachsman M.B.
CS Argentina. wachsman@qb.fcen.uba.ar
SO Medicinal Chemistry Research, (2002) Vol. 11, No. 8, pp. 434-444.
Refs: 20
ISSN: 1054-2523 CODEN: MCREEB
CY United States
DT Journal; Article
FS 030 Pharmacology
037 Drug Literature Index
LA English
SL English
ED Entered STN: 20030925
Last Updated on STN: 20030925
AB Thirty-seven **brassinosteroid** derivatives were tested for their antiviral activity against herpes simplex vires (HSV) type 1 and twenty-seven against HSV type 2, via a vires yield reduction assay. Most of the assayed compounds show selectivity indexes (SI) higher than those obtained with the reference drug, stigmasterol. The compounds that possessed a better structure-activity relationship are 6b [(22S,23S)-3β-bromo-5α ,22,23-trihydroxystigmastan-6-one], 7b [(22S,23S)-3β,5α ,22,23-tetrahydroxystigmastan-6-one] and 12b [(22S,23S)-5α-fluor-3β ,22,23-trihydroxy-stigmastan-6-one] with SI values of 100, 80 and 109 for HSV-1 and 71, 40 and 27 for HSV-2, respectively.
CT Medical Descriptors:
*structure activity relation
*antiviral activity
Herpes simplex virus 1
Herpes simplex virus 2
cell culture
drug selectivity
nonhuman
controlled study
animal cell
article
Drug Descriptors:
***brassinosteroid: AN, drug analysis**
***brassinosteroid: PD, pharmacology**
stigmasterol: AN, drug analysis
stigmasterol: PD, pharmacology
3 beta hydroxystigmasta 5,22 diene: AN, drug analysis
3 beta hydroxystigmasta 5,22 diene: PD, pharmacology
9 (2 hydroxyethoxymetyl)guanine: AN, drug analysis
9 (2 hydroxyethoxymetyl)guanine: PD, pharmacology
2alpha,3alpha,22,23 tetrahydroxy 5alpha stigmastan 6 one: AN, drug analysis
2alpha,3alpha,22,23 tetrahydroxy 5alpha stigmastan 6 one: PD, pharmacology
2alpha,3alpha,5alpha,22,23 pentahydroxystigmastan 6 one: AN, drug analysis
2alpha,3alpha,5alpha,22,23 pentahydroxystigmastan 6 one: PD, pharmacology
3beta acetoxy 22,23 dihydroxy 5alpha stigmastan 6 one: AN, drug analysis
3beta acetoxy 22,23 dihydroxy 5alpha stigmastan 6 one: PD, pharmacology
3beta acetoxy 5alpha,22,23 trihydroxystigmastan 6 one: AN, drug analysis
3beta acetoxy 5alpha,22,23 trihydroxystigmastan 6 one: PD, pharmacology
3beta bromo 22,23 dihydroxy 5alpha stigmastan 6 one: AN, drug analysis
3beta bromo 22,23 dihydroxy 5alpha stigmastan 6 one: PD, pharmacology
3beta bromo 5alpha,22,23 trihydroxystigmastan 6 one: AN, drug analysis
3beta bromo 5alpha,22,23 trihydroxystigmastan 6 one: PD, pharmacology

3beta,5alpha,22,23 tetrahydroxystigmastan 6 one: AN, drug analysis
3beta,5alpha,22,23 tetrahydroxystigmastan 6 one: PD, pharmacology
3beta,5alpha dihydroxystigmast 22 en 6 one: AN, drug analysis
3beta,5alpha dihydroxystigmast 22 en 6 one: PD, pharmacology
2alpha,3alpha,22,23 tetrahydroxy beta homo 7 oxastigmastan 6 one: AN, drug analysis
2alpha,3alpha,22,23 tetrahydroxy beta homo 7 oxastigmastan 6 one: PD, pharmacology
5alpha fluorostigmasta 2,22 dien 6 one: AN, drug analysis
5alpha fluorostigmasta 2,22 dien 6 one: PD, pharmacology
3beta fluoro 5alpha chlorostigmast 22 en 6 one: AN, drug analysis
3beta fluoro 5alpha chlorostigmast 22 en 6 one: PD, pharmacology
5alpha fluoro 3beta 22,23 trihydroxystigmastan 6 one: AN, drug analysis
5alpha fluoro 3beta 22,23 trihydroxystigmastan 6 one: PD, pharmacology
2alpha,3alpha dihydroxystigmast 22 en 6 one: AN, drug analysis
2alpha,3alpha dihydroxystigmast 22 en 6 one: PD, pharmacology
3beta bromo 5alpha hydroxystigmast 22 en 6 one: AN, drug analysis
3beta bromo 5alpha hydroxystigmast 22 en 6 one: PD, pharmacology
3beta fluoro 22,23 dihydroxystigmastan 6 one: AN, drug analysis
3beta fluoro 22,23 dihydroxystigmastan 6 one: PD, pharmacology
3beta fluoro 5alpha 22,23 dihydroxystigmastan 6 one: AN, drug analysis
3beta fluoro 5alpha 22,23 dihydroxystigmastan 6 one: PD, pharmacology
3alpha fluoro 22,23 dihydroxystigmastan 6 one: AN, drug analysis
3alpha fluoro 22,23 dihydroxystigmastan 6 one: PD, pharmacology
3beta bromo 5alpha chloro 6beta hydroxystigmast 22 ene: AN, drug analysis
3beta bromo 5alpha chloro 6beta hydroxystigmast 22 ene: PD, pharmacology
stigmasta 4,22 dien 3 one: AN, drug analysis
stigmasta 4,22 dien 3 one: PD, pharmacology
2alpa,3alpha dihydroxy 6alpha fluoro 5alpha stigmast 22 ene: AN, drug analysis
2alpa,3alpha dihydroxy 6alpha fluoro 5alpha stigmast 22 ene: PD, pharmacology
3alpha,22,23 trihydroxy 5alpha stigmastan 6 one: AN, drug analysis
3alpha,22,23 trihydroxy 5alpha stigmastan 6 one: PD, pharmacology
6beta hydroxy 5alpha stigmast 22 en 3 one: AN, drug analysis
6beta hydroxy 5alpha stigmast 22 en 3 one: PD, pharmacology
2alpha,3alpha,22,23 tetrahydroxy 5alpha fluorostigmastan 6 one: AN, drug analysis
2alpha,3alpha,22,23 tetrahydroxy 5alpha fluorostigmastan 6 one: PD, pharmacology
3beta,22,23 trihydroxy 5alpha stigmastan 6 one: AN, drug analysis
3beta,22,23 trihydroxy 5alpha stigmastan 6 one: PD, pharmacology
3alpha,5alpha,22,23 tetrahydroxystigmastan 6 one: AN, drug analysis
3alpha,5alpha,22,23 tetrahydroxystigmastan 6 one: PD, pharmacology
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AU Wachsman M.B.; Ramirez J.A.; Galagovsky L.R.; Coto C.E.
CS M.B. Wachsman, Laboratorio de Virologia, Departamento de Quimica Biologica, Universidad de Buenos Aires, Buenos Aires, Argentina. wachsman@qb.fcen.uba.ar
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